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PHARMACY AND
PHARMACEUTICAL
SCIENCES

2024 Pharmacy Education Symposium

ORAL PAPER SESSION 6: Equity, diversity
and inclusion in pharmacy education and
practice

Chair: Dr Betty Exintaris

2024 Pharmacy Education Symposium

Evaluation of a Community Pharmacy-based
Seasonal Influenza Vaccination Placement for
Third-year Pharmacy Undergraduates

Dr Jeremy Sokhi

ADMINISTRATION OF SEASONAL INFLUENZA VACCINATIONS BY PHARMACY UNDERGRADUATES: EVALUATION OF CLINICAL PLACEMENT

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OVERVIEW

Background

Seasonal influenza vaccinations in community pharmacy

Method

Design and delivery of the clinical placement

Evaluation

Student and practice educators

Questions

& answers



SEASONAL INFLUENZA VACCINATIONS

- Community pharmacies can administer as an 'advanced service'
- Commissioned by NHS England¹
- Aimed at improving healthcare access amongst at-risk individuals

“Vaccinations should be administered under the supervision of a pharmacist trained in vaccination.”



UEA Pharmacy Experiential Learning – Current Programme

Year 1

Over-the-Counter (OTC)
focused Placement (5 days)

Hospital Pharmacy
Orientation (0.5 days)

5.5 days

Year 2

Hypertension Case-
finding Placement
(5 days)

Medicines Supply-
focused Placement
(10 days)

IPL
Placement
(0.5 days)

15.5 days

Year 3

Services Delivery
(Vaccination)
Placement
(5 days)

Patient-focused
Clinical Placement
(6 days)

IPL
Placement
(0.5 days)

11.5 days

Year 4

Multisector Quality Improvement Placement
(16 days)

16 days

48.5 days

DESIGN AND DELIVERY

Placement set-up

- One community pharmacy chain in England
- 5 consecutive days in November 2023
- Placement developed via engagement from MPharm Placement Providers Advisory Group (MPPAG)
- Practice educators certified to deliver seasonal influenza vaccinations and familiar with UEA programme
- Academic support network at UEA

Student preparation

- Mandatory training through E-learning for Health
- Practical training to deliver seasonal influenza vaccines to national standard
- Smart Card and IT access



70 pharmacies



81 students

EVALUATION

Placement evaluation questionnaires

- Mixed 5-point Likert scale and open-ended questions
- Placement organisation, preparedness, vaccination experience, level of support, learning and assessment of skills (before/after), student's integration within the team
- Completed by students and practice educators one week after the placement

79 (98%) students and 50 (71%) practice educators responded

524 vaccinations (379 directly supervised) were administered by 71/81 students (88%)

Services Delivery (Vaccination) Placement (Year 3) – Mutual Benefits for Students and Healthcare Teams



- ↑ **Confidence in administering vaccinations** (44 (56%) and 64 (81%) agreed/strongly agreed pre- and post-placement, respectively)
- ↑ **Understanding of pharmacists' role** (65 (82%) agreement)
- ↑ **Perceived skills**, especially consultation skills and teamworking (70 (89%) and 67 (85%) agreement, respectively)
- **Smooth integration within the team** and administered vaccinations safely and effectively (45 (90%) agreement each).



- **Scheduling placements earlier** in the year
- **Need to involve students in other services**
- **Financial sustainability** for travel expenses/accommodation.

KEY MESSAGES

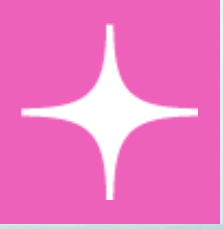
Demonstrates that pharmacy undergraduates can deliver influenza vaccinations

Improves access to patients

Reduces pharmacy staff workload

Financial barriers need addressing before roll-out of similar placements





ACKNOWLEDGEMENTS:

**DR CAROLINE PARKHURST, TEACHER
PRACTITIONER, DAY LEWIS**

**DR TIM RENDELL, HEAD OF PHARMACY,
DAY LEWIS**

THANK YOU!

ANY QUESTIONS?

1. NHS England. Community pharmacy advanced service specification: Seasonal influenza vaccination. 2023. [Internet]. Available from: <https://www.england.nhs.uk/wp-content/uploads/2023/08/PRN00628-cp-seasonal-influenza-vaccination-as-specification-23-24-august-2023.pdf> [Accessed 8 Jan 2024].



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How to Boost Achievement of All Students
Without Lowering Quality Standards:
Reorganizing the Learning Process in
Pharmacy Education

Dr Eszter Csikos

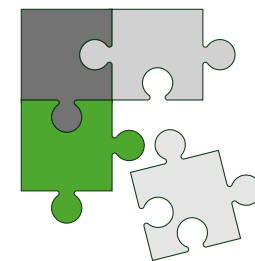
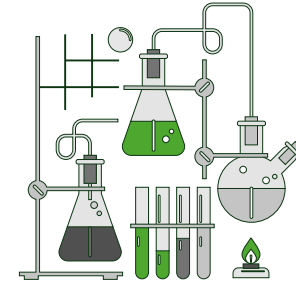
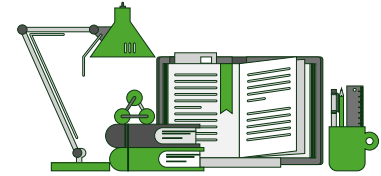
Eszter Csikós, Viktória Lilla
Balázs, Ferenc Arató

How to Boost Achievement
of All Students Without
Lowering Quality Standards:
Reorganizing the Learning
Process in Pharmacy
Education



The need of pharmacy education reforms

- constantly changing and market-driven healthcare environment → flexible response from higher education institutions
- develop problem-solving skills and integrate practice-oriented pedagogical strategies → new evidence-based learning and teaching practices
- aim: updated, competency-based and needs-based pharmacy education in collaborative environment
- student academic performance ↔ **teacher skills**



Faculty of Pharmacy, University of Pécs

1. A change in faculty behavior focusing on peer support and interpersonal cooperation is required for curricular transformation
2. Competency focus is a key element of curricular reform
3. Educational expert cooperation can ensure relevant pedagogy and reliable implementation outcomes
4. The flow of information between stakeholders can ensure curricular effectiveness and optimize student benefits
5. Faculty engagement factors impact program efficacy and curricular development
6. Apply relevant evidence-based data on adult teaching pedagogy and adapt to individualized educational settings
7. Recognize and develop the informal (hidden) curriculum
8. Reflection on learned or experienced pedagogical knowledge is a key element when implementing theory into practice
9. Adoption of the educator role of a facilitator, motivator and formative assessor encourages student progress

Nagy G et al. A Scoping Review of Educator Proficiency Interventions in Pharmacy Education Illustrated by an Interdisciplinary Model Integrating Pedagogical Theories into Practice. *Pharmacy*. 2023; 11(6):172. <https://doi.org/10.3390/pharmacy11060172>

Professional Pedagogical Knowledge Development Program

- education expert faculty support service
- voluntary micro-groups / institute
- digital tools: personalized mapping, self-regulative learning process
- **cooperative learning structures**
- educational mentors





Pharmacognosy

Lectures

- Theory of plant sourced drugs based on active compound groups

Practices

- Seminar about active components and effects
- Organoleptic and microscopic examination
- Phytochemical examination
 - phytochemical tests
 - laboratory methods
 - pharmacopoeial protocols

Development needs

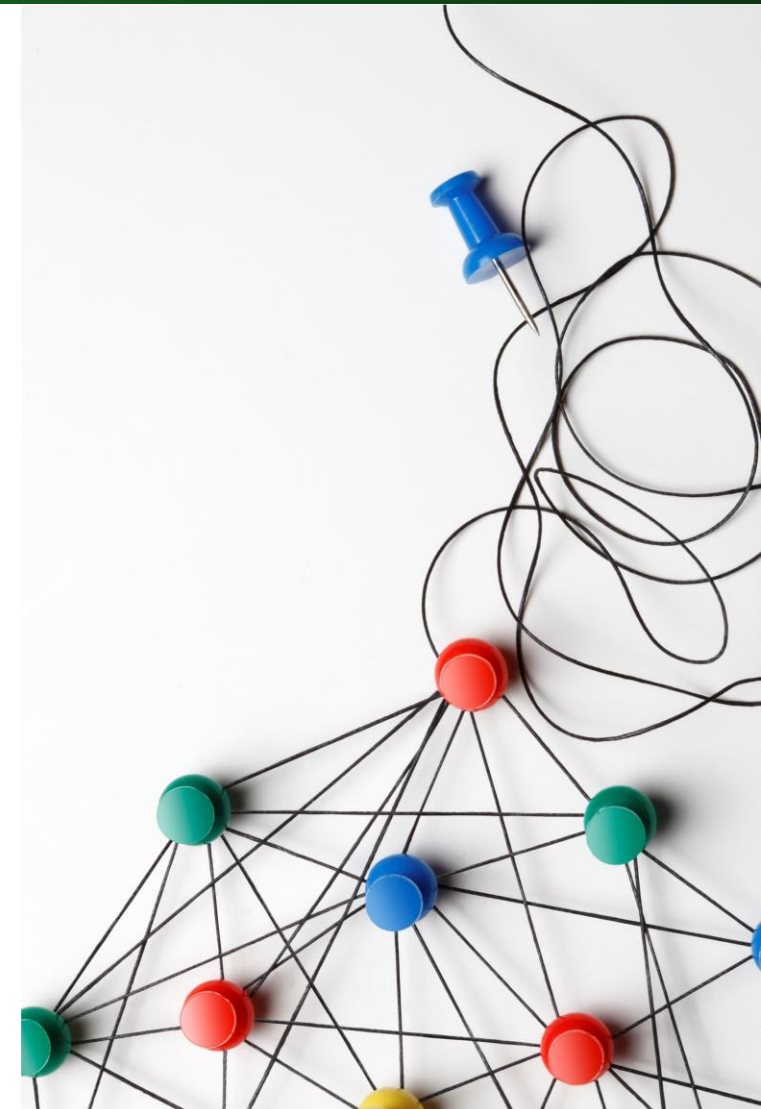
- unmotivated students
- lack of attention
- inability to work together
- inability to finish the practice in time
- many repeated tests

Aims

- highlighting the importance of medicinal plants used in the medical practice
- useful, practical questions for pharmacy students
- encouraging students to continuously study and practice
- encouraging teamwork
- **structural cooperative learning** and varied task types

Methods

- Team work during microscopic-macroscopic evaluation
- Revision of task types and test questions
- Tasks for own processing and better integration of knowledge
- **Cooperative learning on phytochemical practice**
 - Small groups of 3-4 students
 - Distribution of responsibilities
 - Tasks based on each other's results
 - Tasks based on the other small groups' results
 - (Tasks based on the other groups' results)



Measuring tools

Requirements / semester

- Drug identification tests
 - Recognize the drugs, name, source plant, active compounds, effects
- **Phytochemical short tests**
 - Main compounds, effects, side effects, chemical properties, detection, quality measurements
 - All levels of Bloom taxonomy
 - Question types: matching, short answer, long answer, diagram analysis etc.
- Varied interactive task e.g. short lecture, situation
- Notebook + work on practice

Course objective and role in the curriculum

Students should become familiar / be able to:

- with plant materials and drugs
- the main groups, active ingredients, and medicinal use of official drugs (Ph.Eur., Ph.Hg.)
- the role of medicinal herbs and their active ingredients in the pharmaceutical industry
- the grouping of the active ingredients of medicinal herbs
- the most important knowledge about plant raw materials (e.g. wild medicinal plants, medicinal plant cultivation, biotechnology)
- the basics of phytotherapy (strength, interaction, side effects)
- the most common medicinal forms that can be prepared from herbal drugs (e.g. tincture, infusion, decoction, etc.)
- the microscopic, macroscopic, and purity testing methods used in the classification of herbal drugs
- compose a plant-based preparation and check its quality
- recommend a plant-based preparation to the patient
- work in workplaces where medicinal plants play a role (authority, public traffic, industry)
- participate in successful drug therapy and filter out side-effects and interactions related to herbal products
- participate in individualized drug therapy
- value the information about medicinal plants
- work on herbal medicine certification based on regulations

Results – test avarege

	Number of Subjects	Mean	Standard Deviation	
Group 1:	13	77,29	8,4504	} Controll groups
Group 2:	13	78,46	10,2924	
Group 3:	12	73,64	10,4763	
Group 4:	12	93,61	7,3016	} Experimental groups
Group 5:	13	92,28	9,0837	
Group 6:	12	91,8	9,1082	

Group selection:

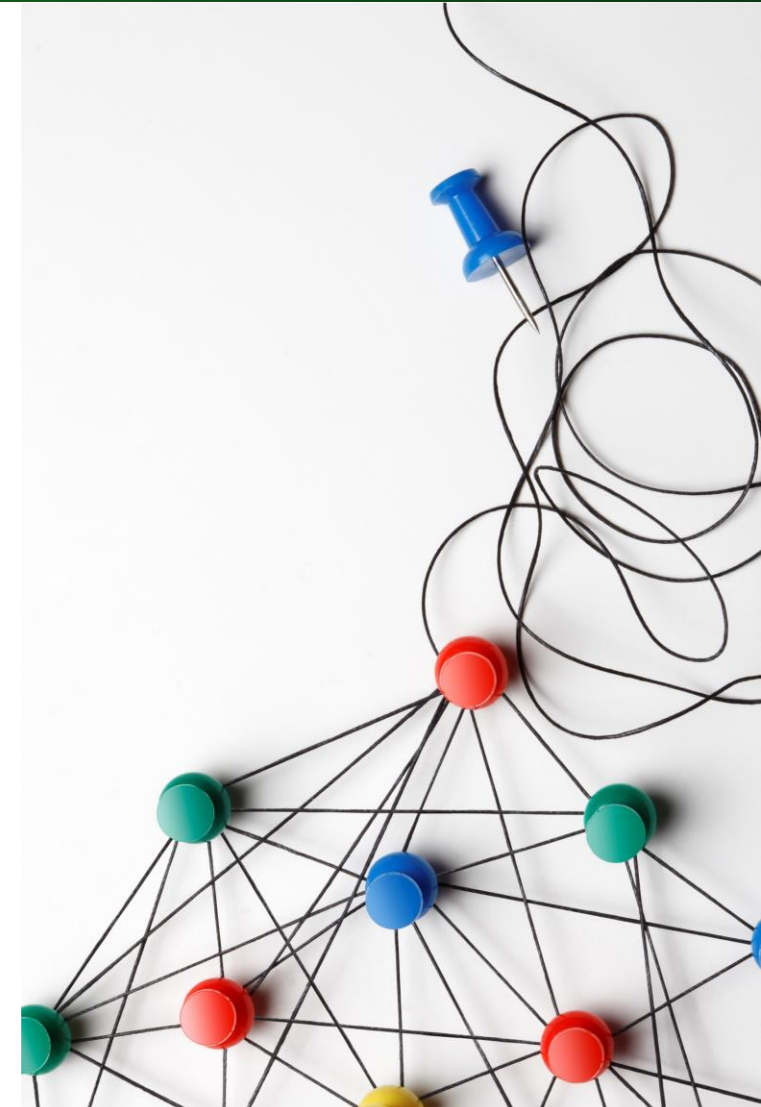
- 10-13 students
- no pandemic online groups
- same teacher
- same language

ANOVA
critical F-value 2.34754989
P-value: 0,00000003

	SS	df	MS	F	p
Between:	4,987.312	5	997.462	11.816	0.000
Within:	5,824.557	69	84.414		
Total:	10,811.870	74			

Summary

- In the native language groups – significant differences all 3 repeated experimental semesters
- In English-language groups – significant improvement but higher standard deviation
- The tests were good measurement tools
- High variance is not characteristic of successfully adapted cooperative processes
- The direction is good but we still need to improve





Thank you!





2024 Pharmacy Education Symposium

A qualitative investigation of Black and Asian
Minority Ethnic (BAME) MPharm students'
opinions of the MPharm programme

Simon Archer



UNIVERSITY OF
PORTSMOUTH

A qualitative investigation of Black and Asian Minority Ethnic MPharm students' opinions of the diversity and inclusivity of the MPharm course

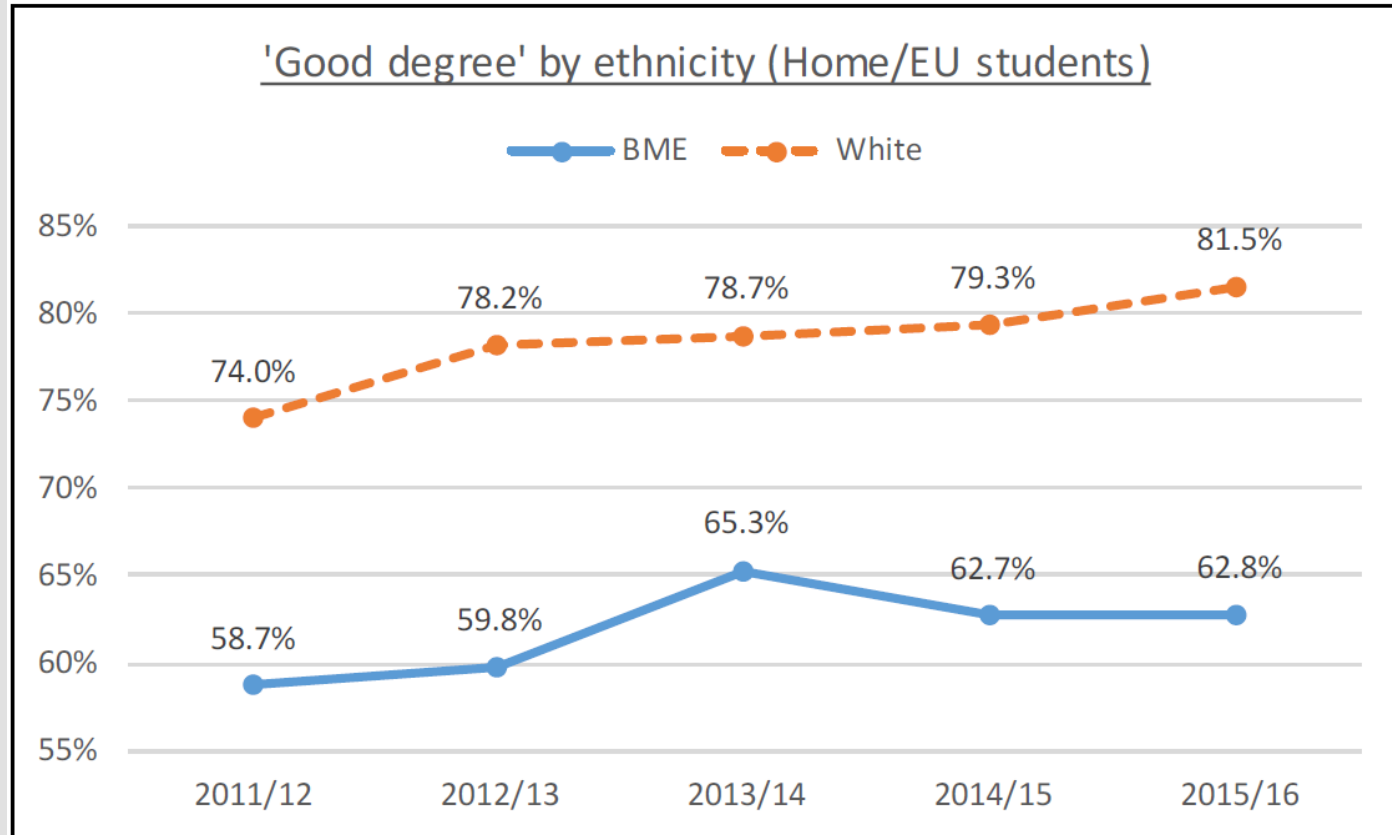
Your subtitle goes here

Mr. Simon Archer

**YOUR TIME.
YOUR PLACE.**



Award gap



2015-16, 73% (n=4759) of students at the University of Portsmouth (UOP) were awarded a good degree,

81.5% (n=2914) of white students and 62.8% (n=1365) of BAME students.

Furthermore the Science Faculty at UOP awarded 73% (194) of BAME students a good degree compared to 84% of white students.(Ross, 2017)

MPharm at UoP

	2016-17		2017-18		2018-19	
	Number	%	Number	%	Number	%
BAME	303	65.9	316	68.8	293	67.8
White	120	26.1	100	21.8	90	20.8
Unknown	37	8	43	9.4	49	11.3
Total	460	-	459	-	432	-

2019's registration assessment

The pass rate for white British students was 91% and for Black African students it was 61%, a gap of 30%, and this gap had widened by 4% from the previous year (92% compared to 66%).

Method

Semi structured qualitative approach: focus groups

Ran in December 2019

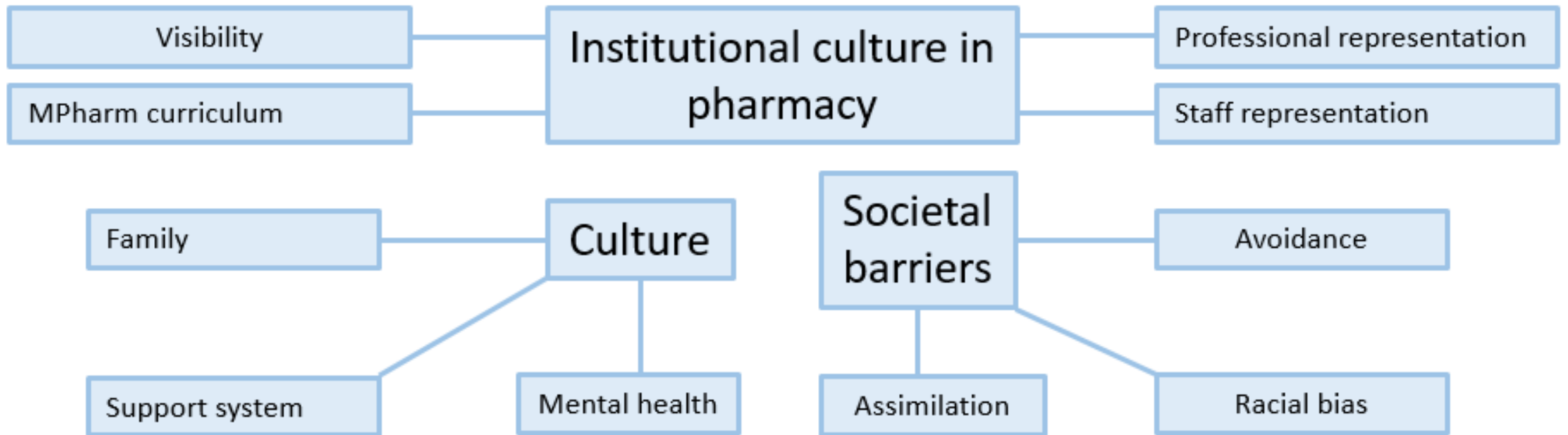
Level 6 & 7 students

8 groups with between 3-7 participants

Ethnically homogeneous (Greenwood *et al*, 2014)



Established Themes



Institutional culture in pharmacy

“It’s more whitewashed in university, I think.”

– Participant 14A7.



Culture

“Oh, yes. Even if I try to go to my family, they’re like, you can’t complain. You need to be strong”

– Participant 31A6.



Societal barriers

“You’re not meant to be here. You’re different. And it’s just that constant... It’s constantly quite discouraging to live in this place.”

– Participant 6B7.



Recommendations

1. **Representation in academic staff**
2. **BAME patient representation**
3. **Academic support**



Dissemination & importance

- Teaching and learning conference at UoP – Sharing best practice**
- Athena Swan bronze award**
- The Race Equality Charter**
- Increased sense of belonging**
- Repeating the research to review impact of changes**

Thanks to

**Kristine Invierno
Chioma Udeh**

References

Greenwood, N., Ellmers, T., & Holley, J. (2014). The influence of ethnic group composition on focus group discussions. *BMC Medical Research Methodology*, 4, 107.

Solórzano, D. G., & Yosso, T. J. (2002). Critical Race Methodology: Counter-Storytelling as an Analytical Framework for Education Research. *Qualitative Inquiry*, 8(1), 23–44.

<https://doi.org/10.1177/107780040200800103>

THANK YOU

for

listening.



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2024 Pharmacy Education Symposium

Exploring the views of school of pharmacy students on an Equality, Diversity, and Inclusion (EDI) teaching package

Gautam Paul



University of
Nottingham
UK | CHINA | MALAYSIA

Exploring the views of school of pharmacy students on an Equality, Diversity, and Inclusion (EDI) teaching package

Gautam Paul

MPharm Course Director





Background

- Providing training and understanding of equality, diversity and inclusion (EDI) is a requirement for the UK pharmacy curriculum (GPhC, 2021).
- Planned throughout the course in the classroom and workplace

Disability: Year 1 Semester 1

Age and Sex: Year 2 Semester 1

Race and Religion: Year 2 Semester 2

Sexual orientation, gender reassignment, maternity, marriage and civil partnership: Year 3, Semester 1

Revisit all protected characteristics: Year 3, Semester 2

Intersectionality –Year 4 Semester 1 and 2



Work to date

- Disability: Year 1 Semester 1 – teaching package (student co-created) and workshop
- Race and Religion: Year 2 Semester 1 – teaching package (student co-created) and workshop
- Age and Sex: Year 2 Semester 2 – group tutorial

Aim: Evaluate the use of the disability teaching package and workshop



Method

Completion of questionnaire at end of workshop

- Views on teaching package
- Views on workshop

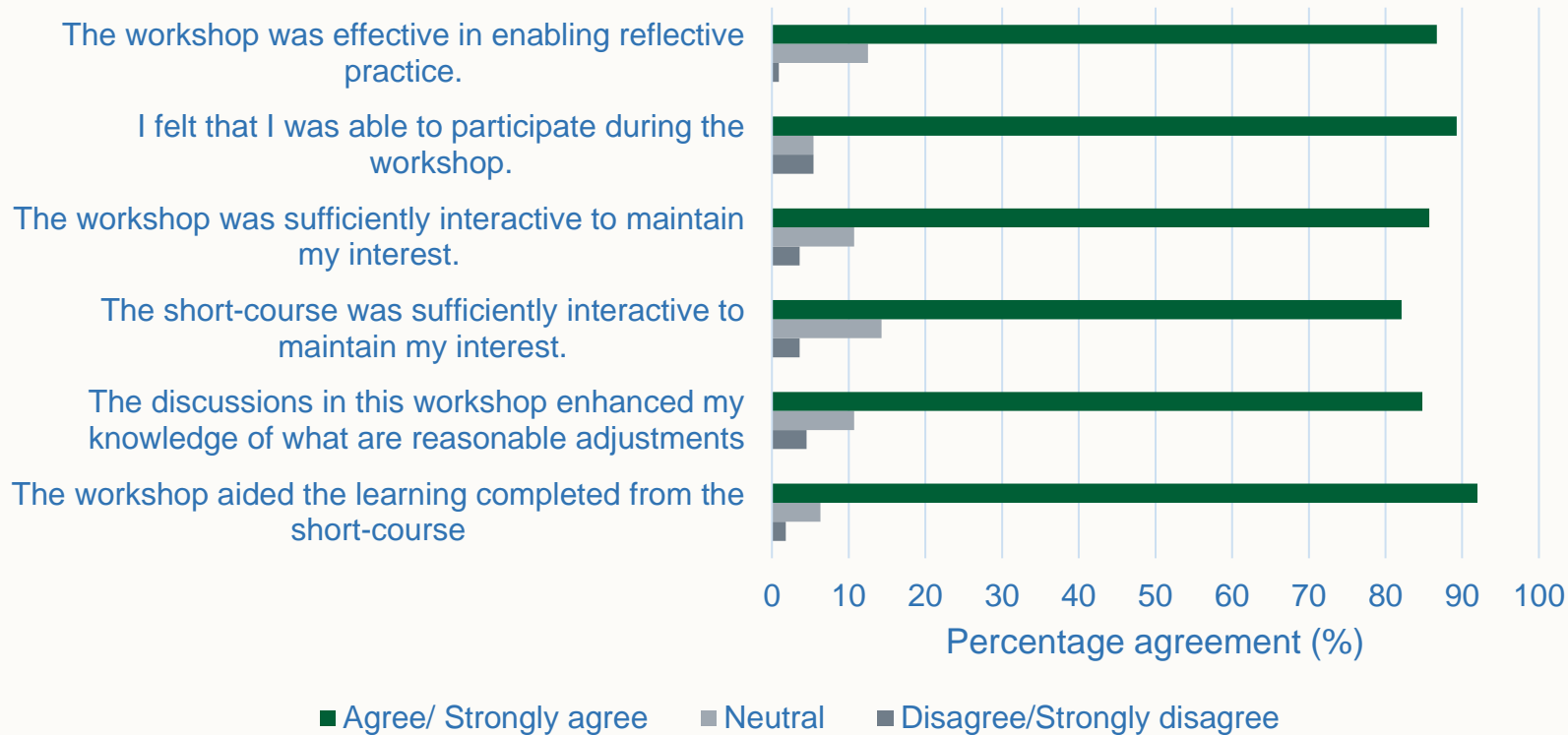
Analysis – frequency counts with percentages, and thematic analysis of open questions

MPharm Year 1 students undertook teaching package and participated in workshop





Results



- 111 students responded (54%)
- Majority of responses were from female students (78%)
- Majority of students were home/EU students (75%)



Results

Enabling participation

“An open environment to talk about difficult topics in an open discussion” (s44)

Learning about EDI

“Made me realise there’s more issues than I was aware of” (s86)

Delivery of teaching package

“Hard to find all the information” (s66)

Engagement

“Get more people involved and engaged” (s83)



Conclusions

- Overall positive views about the teaching package and workshop
 - Enabled students to participate and engage
 - Built awareness of disability and what it means for them and others
- Improvements need for future years
 - Delivery of teaching package with respect to duration and navigation
 - Facilitation of workshop to be reviewed to enable greater participation



Next plans

- Sexual orientation, gender reassignment, maternity, marriage and civil partnership: Year 3, Semester 1 - simulation
- Revisit all protected characteristics: Year 3, Semester 2 - PCAP
- Intersectionality –Year 4 Semester 1 and 2 – case studies, simulation



Acknowledgements:

School of Pharmacy interns Carol Watfi, Charlie Roberts, Lucy Bradeley, Nicole La, Prinesh Mistry, Raveen Basra and Summer Tan

Lisa White, Associate Professor in the School of Pharmacy.

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Staff: Helen Boardman, Kathy Wilson, Lauren Naylor-Morrell, Pavel Gershkovich, Richard Roberts, Sarah Greaves (Student Support Services), Adam Lester (Disability Support Services), Yvonne Hood and Vibhu Solanki

All the students who participated in interviews (design of teaching package) and surveys



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Thank you

2024 Pharmacy Education Symposium

An evaluation of a Multi-Sector MPharm pilot placement across a large rural geographical footprint

Dr Helen Paine

The Times and Sunday Times University of the year 2023



UNIVERSITY OF
BATH

THE  TIMES
THE SUNDAY TIMES

**GOOD
UNIVERSITY
GUIDE
2023**

**UNIVERSITY
OF THE
YEAR**

An evaluation of a Multi-Sector Pilot Placement across a large rural geographical footprint

Dr Helen Paine
MPharm, PhD, PGCE, FHEA, PGCert, IP
Lecturer & Senior GP Practice Pharmacist

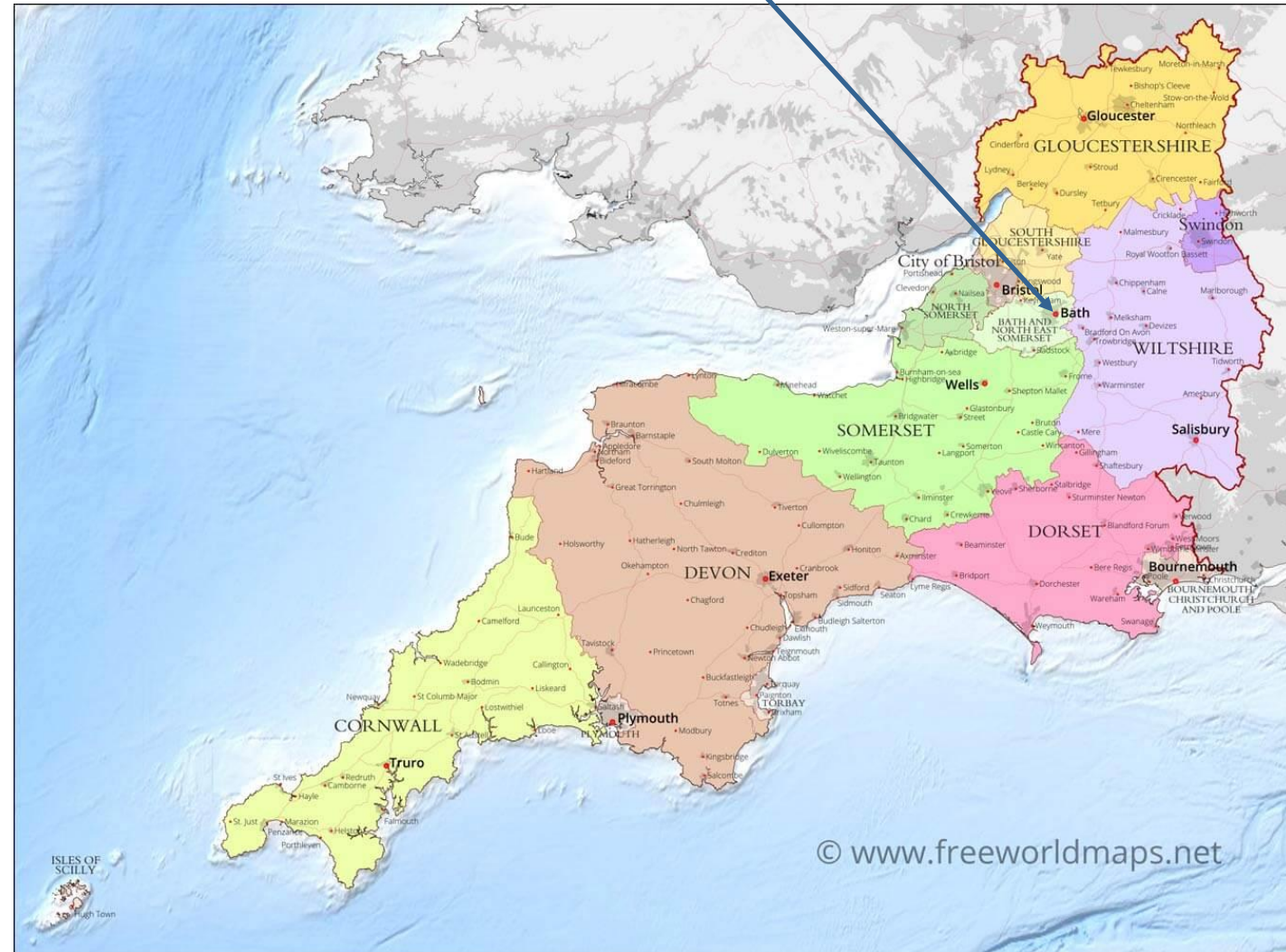


Placements in the Bath MPharm programme



Where are we?

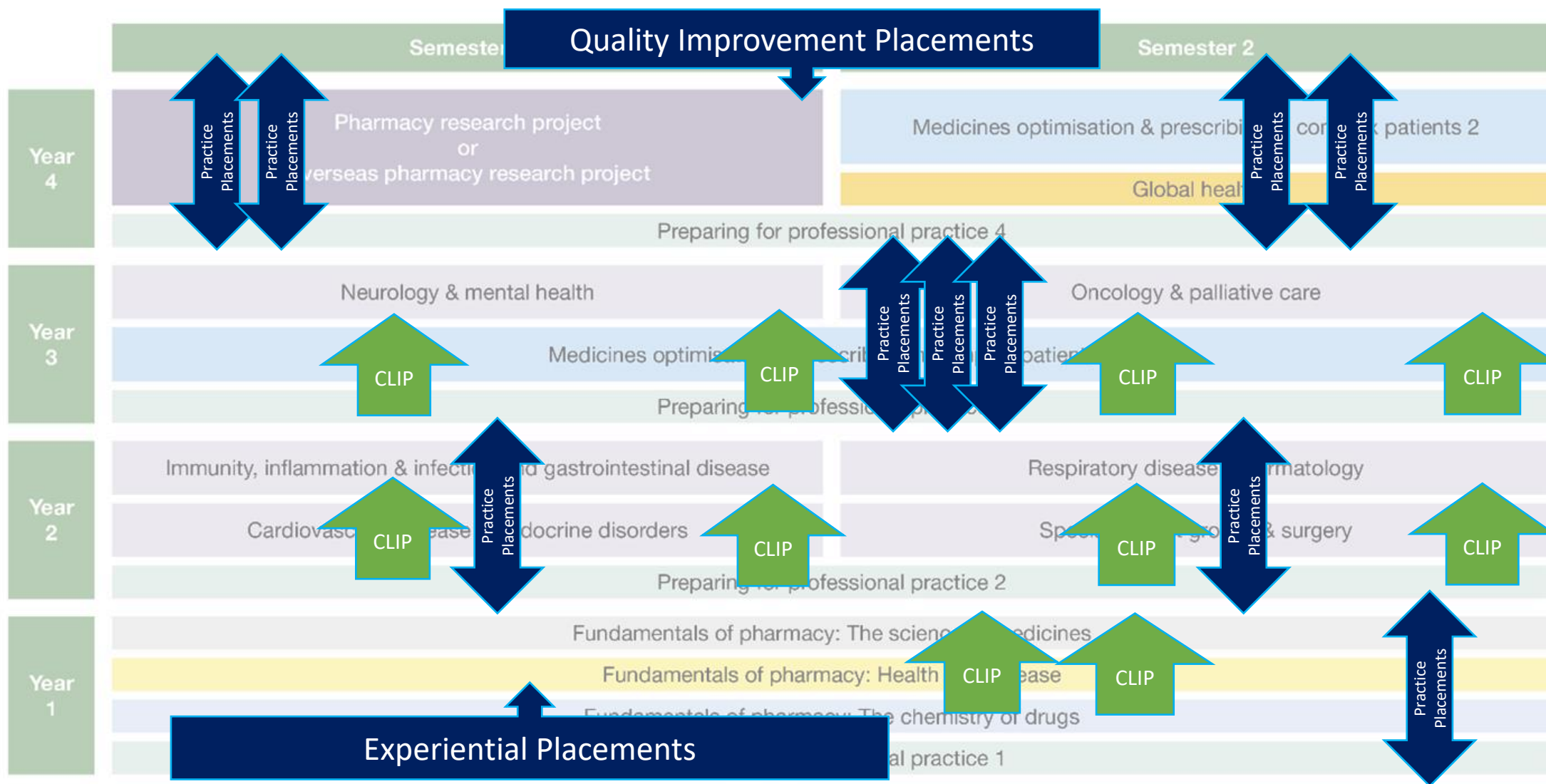
- South-West of England
- Large rural geography (23,800 Km²)
- Largest region in England
- Population 5.7 million people
- 23% population over 60 (female) and over 65 (male)
- Large Social and Educational divide compared with rest of England
- Difficult to recruit and retain HCPs



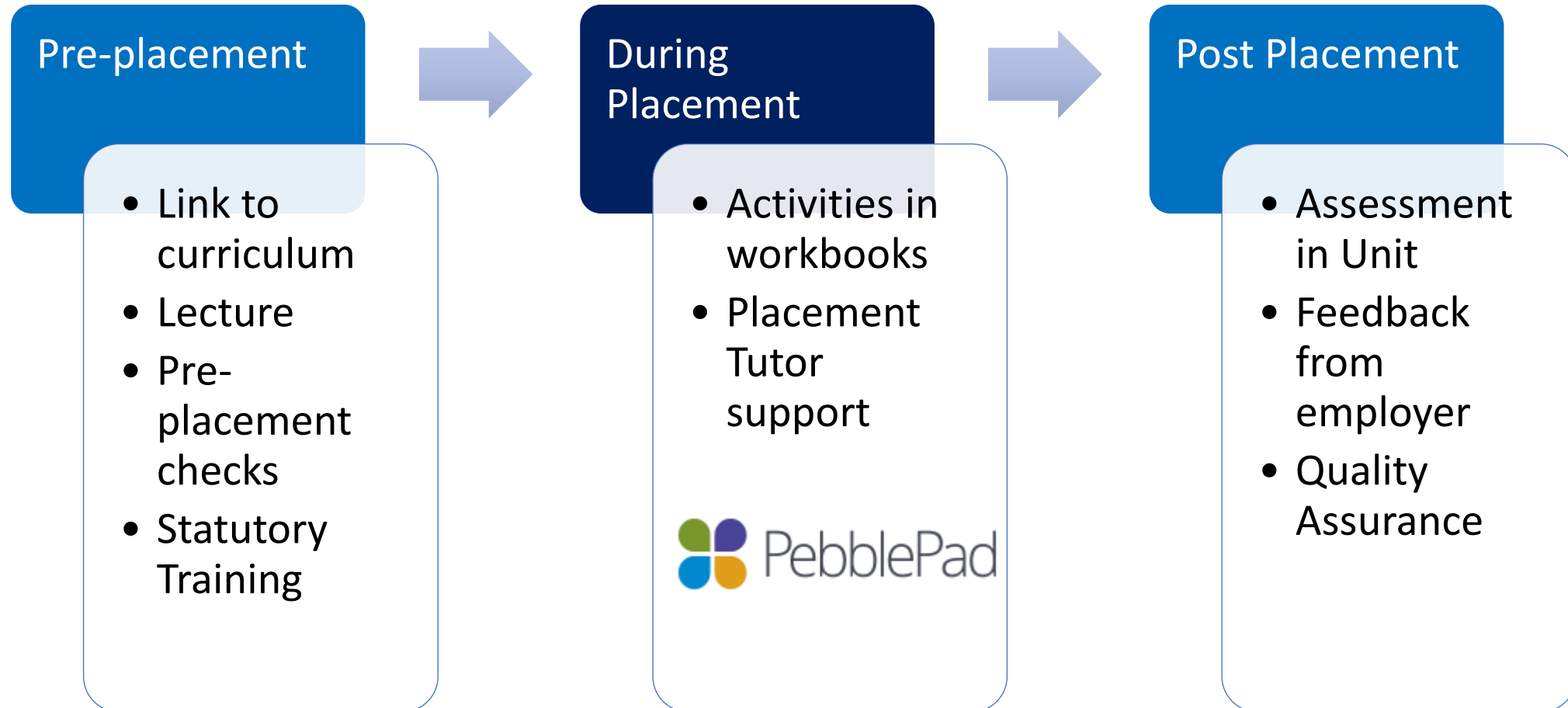
The Bath MPharm Programme (4 year)

	Semester 1	Semester 2
Year 4	Pharmacy research project or Overseas pharmacy research project	Medicines optimisation & prescribing in complex patients 2
	Global health	
	Preparing for professional practice 4	
Year 3	Neurology & mental health	Oncology & palliative care
	Medicines optimisation & prescribing in complex patients 1	
	Preparing for professional practice 3	
Year 2	Immunity, inflammation & infection and gastrointestinal disease	Respiratory disease & dermatology
	Cardiovascular disease & endocrine disorders	Special patient groups & surgery
	Preparing for professional practice 2	
Year 1	Fundamentals of pharmacy: The science of medicines	
	Fundamentals of pharmacy: Health and disease	
	Fundamentals of pharmacy: The chemistry of drugs	
	Preparing for professional practice 1	

The Bath MPharm Programme (4 year)



Placement Structures



Pilot Placement Development and Timeline

October 2021: Awarded funding by NHS England for Additional Placement Capacity in MPharm

January 2022: Expressions of Interest sent to Training Hub Leads, Direct contact made with GP Practices, Preferencing data captured from Students, Development of e-workbook for Tutors and Students

February / March 2022: Virtual Tutor training delivered, Placement matching process, Accommodation and travel organised, Statutory Training completed by Students, Pre-Placement lecture delivered to Students

April 2022: First Multi-Sector Placement (3 days in GP Practice and 2 days CP) delivered

Pilot Placement Aims

- Test increased placement capacity in the MPharm
- Increase students' understanding of General Practice (GP) Pharmacist roles and consolidate and increase existing learning in Community Pharmacy (CP)
- Opportunity for students to practice skills learnt at University *e.g.*, undertaking Medication Reviews and Clinical Skills on real patients
- An opportunity to gain vital experience in a relatively new sector prior to Students' Oriiel choices
- To encourage Students to consider the South-West of England as somewhere to live and work in the future



Evaluation: Key Learning

Inaugural Multi-Sector Pilot Placement April 2022

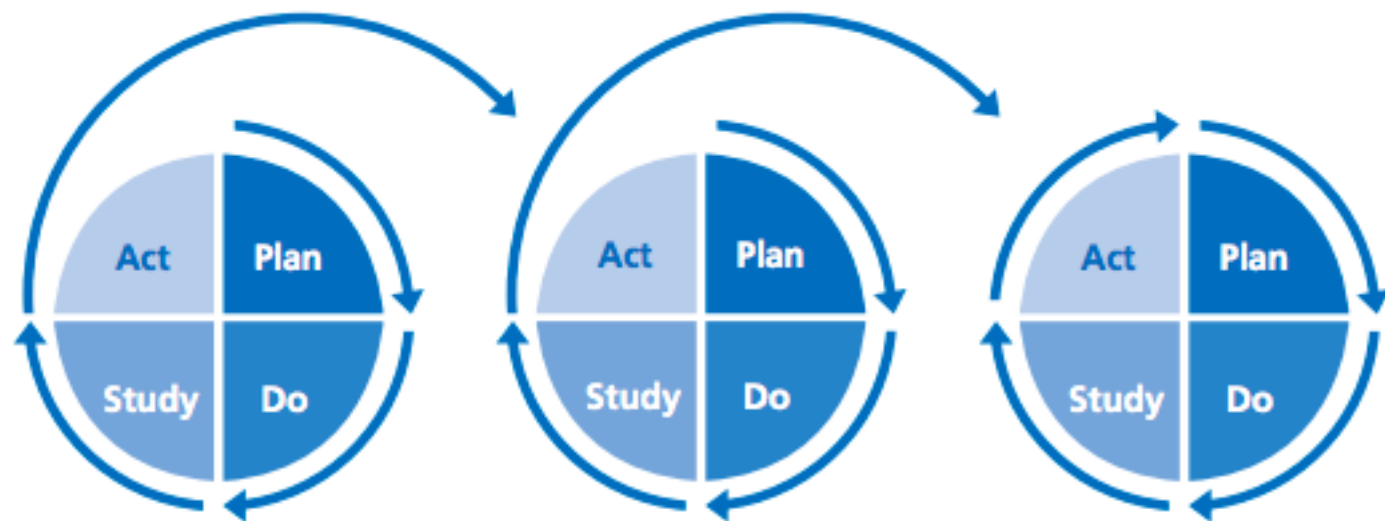
- 87 students
- 3 days GP, 2 days CP
 - 41 Providers
 - 1 Meds Review + 1 CPCS

What went well:

- Overwhelmingly positive feedback

Even better if:

- More face-to-face time with patients
- Split placement challenging
- Earlier communication with Students and Providers
- Better awareness of student competence needed by Providers



Evaluation: Key Learning

GP Practice Placement February 2023

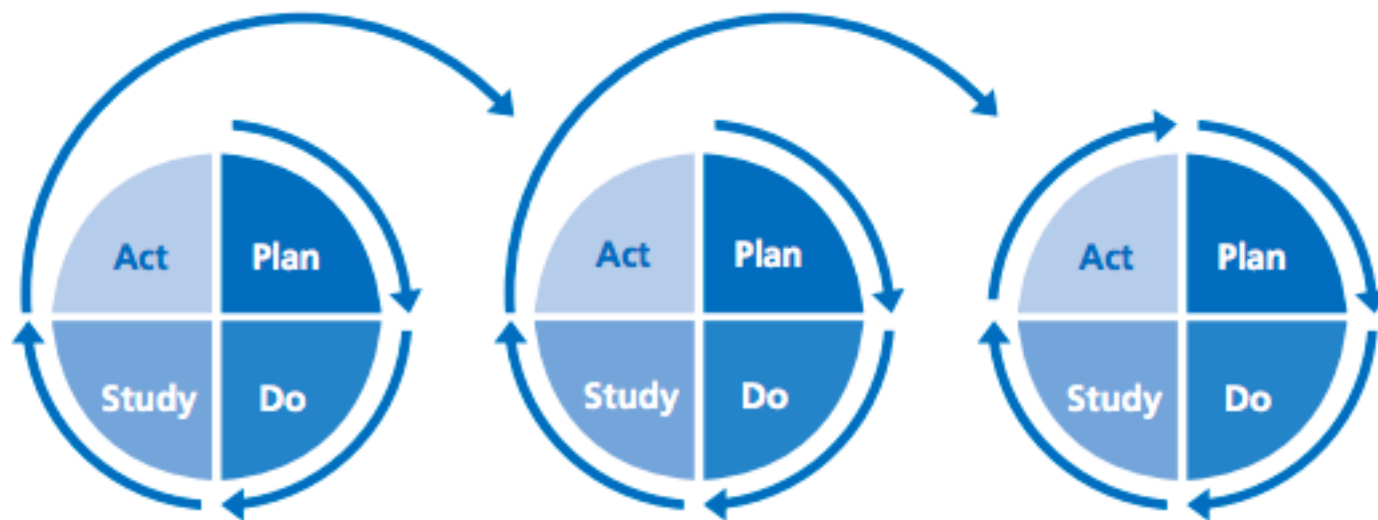
- 58 students
- 5 days GP Practice
- 38 Providers
 - 1 Meds Review +
1 Clinical skill

What went well:

- Very positive feedback from Tutors and Students
- Introduction of Clinical skill task demanded more face-to-face time with patients

Even better if:

- Students wanted more time in GP Practice



Evaluation: Key Learning

Multi-Sector Placement February 2024

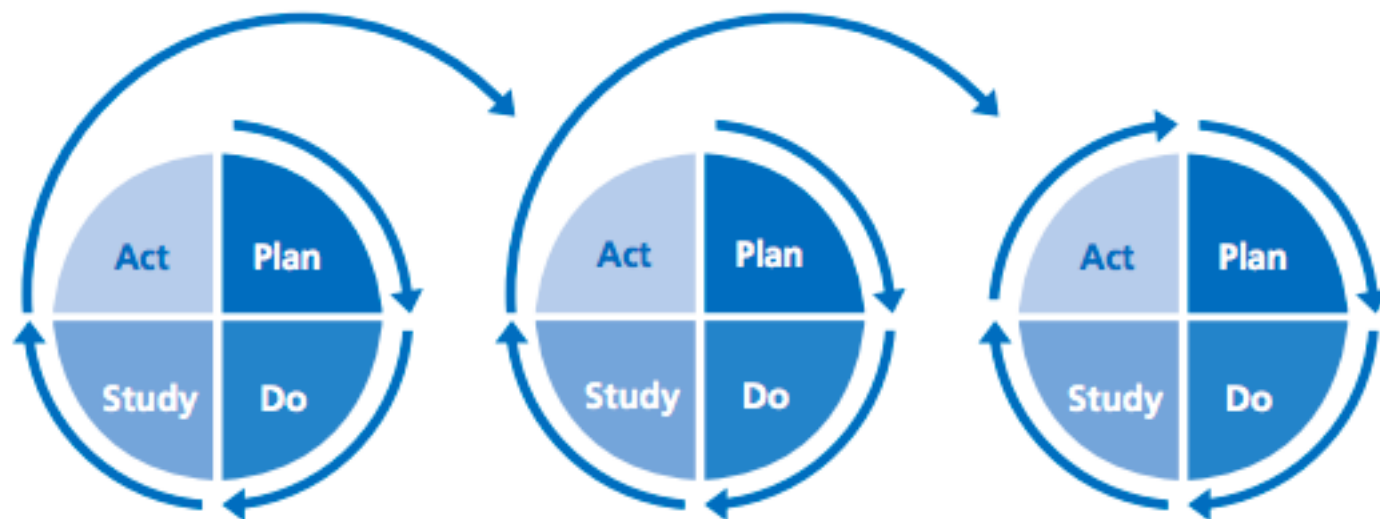
- 75 students
- 3 weeks (2 in GP Practice, 1 in CP)
- 43 Providers
 - 14 Practice-based Tasks (7 in GP, 7 in CP)

What went well:

- Expansion of placement provision in line with new MPharm strategy
- Placement-based tasks useful and relevant

Even better if:

- Change of culture for Students and Providers towards longer, multi-site placements
- Avoidance of public school holidays will improve Provider take-up



“We would welcome our students back at any time and have also raised the potential of final year projects with them - continuity of the work they started in practice as part of their mini audit

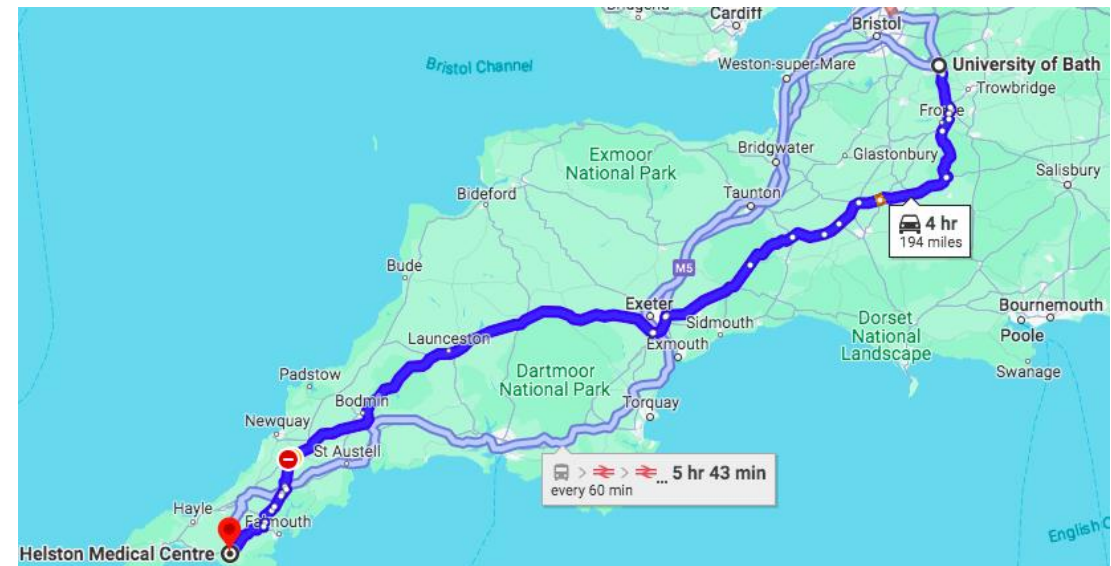
Senior Clinical Pharmacist, South Kerrier PCN, Cornwall



Placement Development

~~Challenges~~ *Challenges we are meeting these challenges:*

- Nearly 200 miles to our furthest placement provider!
- School of Pharmacy, University of Plymouth
- Poor public transport infrastructure in many areas
- Entrustable Professional Activities (EPAs)
- Accommodation and travel expensive to provide
- Face-to-face time with patients
- MPharm student numbers
- Transition from 'Knows how' to 'Does'
- QA of Placement Providers
- Recruitment of Placement Providers
- Marking / paperwork burden



Thank you for listening

Any questions?



Appendix slides

2021/22 Multi-Sector Placement Results from our students

(response rate 37% (32 responses from 86 students))

On the GP Practice element of the placement:

- **96.9%** respondents enjoyed their placement (rated 4 or 5 out of 5, where 5 = very much)
- **96.9%** respondents felt they had 'fully met' or 'met' the Intended Learning Outcomes
- **84.4%** respondents felt that the Medication Review activity was 'very useful' or 'useful'
- **93.8%** respondents said that their GP Practice Pharmacist Tutor had positively contributed to their placement experience (rating them 4 or 5 out of 5, where 5 = very much)
- Compared with **16.1%** respondents before the placement, **84.4%** of respondents said they would consider working in a GP Practice in the future (rated 4 or 5 out of 5, where 5 = very much)
- Students would like to have had more face-to-face experience with patients

Results from our students

(response rate 37% (32 responses from 86 students))

On the Community Pharmacy element of the placement:

- **31%** respondents enjoyed their placement (rated 4 or 5 out of 5, where 5 = very much)
- **66.6%** respondents felt they had 'fully met' or 'met' the Intended Learning Outcomes
- **60.7%** respondents felt that the CPCS / DMS / NMS activity was 'useful' or 'very useful'
- **59.3%** respondents felt that they could experience a different (and more advanced) range of activities in this placement compared to previous Community Pharmacy Placements arranged by the University
- **65.4%** respondents said that their GP Practice Pharmacist Tutor had positively contributed to their placement experience (rated either 4 or 5 out of 5, where 5 = very much)
- Compared with **17.2%** respondents before the placement, **10.7%** of respondents said they would consider working in Community Pharmacy in the future (rated either 4 or 5 out of 5, where 5 = very much)

Results from our Pharmacist Tutors

40% response rate (43 responses from 107 Pharmacist Tutors)

- **93%** respondents enjoyed hosting our students on placement (rated 4 or 5 on a sliding scale where 5 = very much)
- **86%** respondents felt that the placement had met it's Intended Learning Outcomes (rated 4 or 5 on a sliding scale where 5 = fully met)
- **74.5%** respondents could access the virtual training session ran by the University, either live or by catch-up
- **69.8%** respondents felt well prepared by the University before hosting students (rated 4 or 5 on a sliding scale where 5 = very much)
- **97.7%** respondents would consider hosting one of our students again for a similar placement

2022/23 GP Practice Placement Student Feedback

Student survey	Feel well prepared?	Placement well organised?	Meds review suitable?	MBPA suitable?	Tutor helped find appropriate patients for tasks	Placement gave access to a range of experiences?	Placement helped inform me of future career choices	The GP practice setting was appropriate for this placement
21/58 answered	90% yes 10% no	90% yes 10% no	75% Strongly Agree 5% Agree 5% Neutral 5% Disagree 10% Strongly Disagree	50% Strongly Agree 30% Agree 10% Neutral 5% Disagree 5% Strongly Disagree	100% yes	95% yes 5% no	95% yes 5% unanswered	100% yes

Multi-Sector Placement 2023/24 Feedback

GP placement Tutor feedback

Areas providers were able to give students experience in:

- 94.7% of providers were able to offer time shadowing a clinical pharmacist.
- 100% of providers were able to offer shadowing of other clinical team members.
- 94.7% of providers were able to offer shadowing of non-clinical team members.
- 94.7% of providers were able to offer face-to-face patient interaction.
- 84.2% of providers were able to offer telephone/online patient interaction.
- 84.2% of providers were able to offer patient engagement activities.
- 100% of providers were able to offer transfer and communication of care with other primary and secondary care settings.
- 94.7% of providers were able to offer safety and monitoring activities.
- 89.5% of providers were able to offer audit.
- 73.7% of providers were able to offer Quality Assurance work.
- 5.3% of providers were able to offer Dispensary Activities.

Multi-Sector Placement 2023/24 Feedback

- ***Other statistics from tutor feedback:***

- 63.2% of providers Strongly Agreed or Agreed students were well prepared on arrival for placement.
- 89.5% of providers Strongly Agreed or Agreed the tutor guide provided sufficient information on all aspects of the placement.
- 68.4% of providers Strongly Agreed or Agreed the tutor training event was useful and informative.
- 84.2% of providers Strongly Agreed or Agreed the placement tasks were appropriate for students.
- 57.9% of providers Strongly Agreed or Agreed the placement tasks were easy to organise.
- 73.7% of providers Strongly Agreed or Agreed the students were able to undertake all tasks in their practice base.
- 94.7% of providers Strongly Agreed or Agreed there was sufficient time on placement for tasks to be completed.
- 78.9% of providers Strongly Agreed or Agreed the student performance review was easy to complete.
- 84.2% of providers Strongly Agreed or Agreed that they understood the nature and level of assessment required.
- 73.7% of providers Strongly Agreed or Agreed that they were able to contact the University and receive a timely response to queries.
- 78.9% of providers Strongly Agreed or Agreed that the placement was well organised administratively.
- 78.9% of providers Strongly Agreed or Agreed that 2 weeks in GP practice was an appropriate length of time for the placement

Multi-Sector Placement 2023/24 Feedback

- ***General student feedback:***
- 100% of students felt well prepared for their GP placement.
- 85.3% of students felt their placement was well organised and structured.
- 70.6% of students felt two weeks was an appropriate length of time for this placement.
- 97.1% of students felt this placement helped inform them of their future career choices.
- 94.1% of students felt the GP setting was appropriate for this placement.

Multi-Sector Placement 2023/24 Feedback

Feedback on this placement being part of a 3-week placement

- 39.1% of students Strongly Agreed or Agreed that the structure of two weeks in a GP practice followed by one week in community pharmacy was suitable for their learning needs.
- 34.7% of students Strongly Agreed or Agreed that the combination of GP and Community sectors worked well for the placement.
- 26.1% of students Strongly Agreed or Agreed that they prefer this structure of placement versus the normal form.
- 30.4% of students Strongly Agreed or Agreed that they would like to do a placement this length again.
- 26.1% of students Strongly Agreed or Agreed that the length of this placement offered enough time to get all tasks for both parts completed.



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2024 Pharmacy Education Symposium

Remote extemporaneous compounding
practicals for Pharmacy students

Dr Ronald Lee



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MALAYSIA

Remote Extemporaneous Compounding Practicals for Pharmacy Students

Ronald F.S. Lee
School of Pharmacy
Monash University Malaysia



Background and need

- Extemporaneous lab skills are essential in Pharmacy education
- The need to develop remote approaches to laboratory teaching (e.g. in response to a pandemic)
- Kinesthetic component of lab teaching is challenging to address remotely



Our solution - Educational Activity and Setting

Setting: Pharmacy Schools in **Monash University Malaysia**, University of Michigan, and University of Maryland

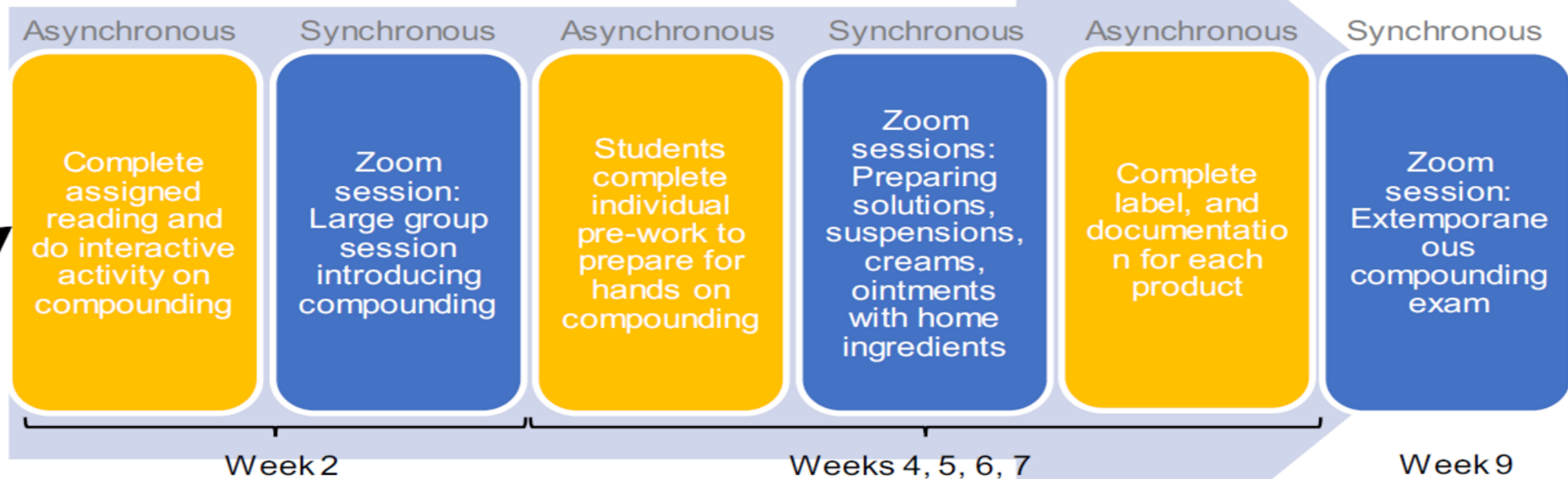
Population: Pharmacy students

Differences:

1. Whether equipment and consumables were supplied or self purchased
2. Whether the practicals were synchronous/asynchronous
3. Whether assessments were synchronous or asynchronous
4. Specific formulation type (though all schools used simple formulations)

Implementation Steps - Monash Malaysia

Students asked to procure a set of equipment and ingredients for remote compounding sessions (3 weeks prior to the semester starting)



All compounding course materials were available on the learning management system starting at week 1 including an interactive module for learning about extemporaneous compounding on Moodle. Students received the cases and prepared labels using MyDispense and were expected to prepare a product, label, and proper documentation. During Zoom compounding sessions and the compounding exam, students prepared extemporaneous preparations with video supervision by academics in breakout rooms with 10 students/facilitator.

Implementation

Formulations, ingredients, and equipment	Class size	Facilitator: student ratio
<p>Preparations:</p> <ol style="list-style-type: none">1. Citric acid mixture (salt, sugar, and water)2. Trimethoprim suspension (calcium carbonate tablets, 1% starch suspension and syrup)3. Sulphur and salicylic acid cream (aqueous cream/mayonnaise, turmeric powder, and salt)4. Liquid paraffin and white soft paraffin ointment (liquid paraffin and petroleum jelly) <p>Equipment:</p> <p>Tablespoons, teaspoons, syringes, kitchen scale, bottle, baking paper, metal spatulas, graduated measuring cylinders, glass funnels, beakers, mortar and pestle, plastic chopping board (to replicate ointment slab)</p> <p>All ingredients and equipment self-purchased by students, but students were provided with a fixed monetary compensation.</p>	<p>109 divided into 2 groups (pilot study)</p> <p>160 divided into 3 groups (full scale study)</p>	<p>1:10–11</p>

Pre classroom activities

Extemporaneous Dispensing Active Learning

Salicylic Acid & Sulfur Cream APF23



03:27 / 05:13

CHAPTER 4 MENU MAIN MENU

← PREV NEXT →

Synchronous Zoom sessions



Cases via MyDispense

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YUI: Cream Prescription
Ex: Salicylic acid and sulphur cream aqueous...

owee0002

Prescription 3248

Dr. Darshan Aman
18 Thanet St, Pharmville,
Victoria, 3052,
Ph: 78403332
Prescriber no. U629565

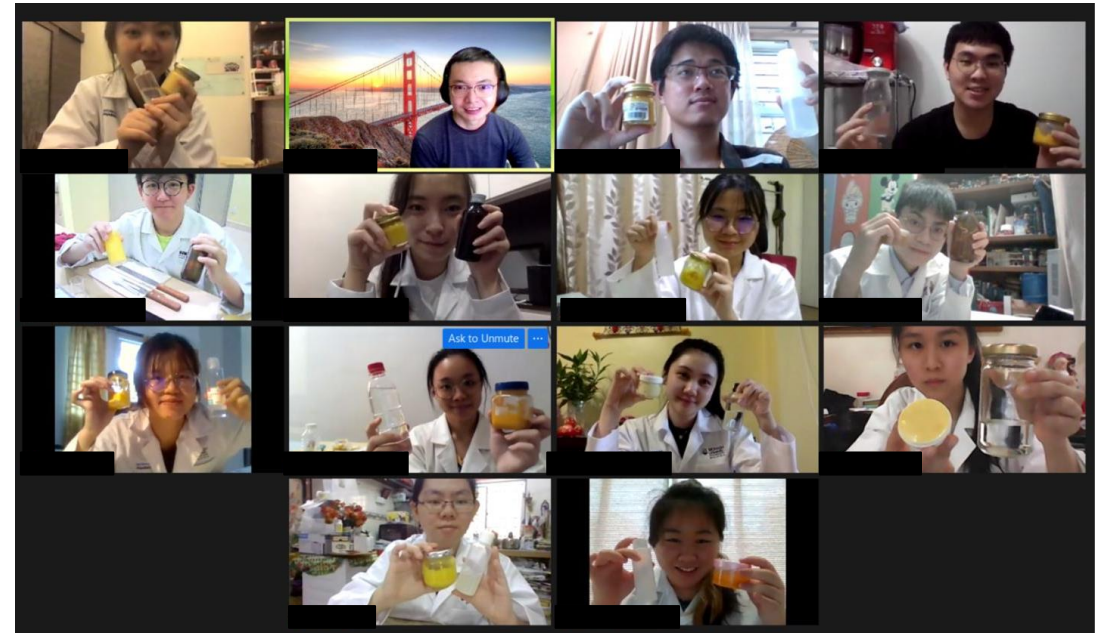
Patient's Medicine no. 4186 3618 SW 7
Pharmaceutical benefits entitlement no. []
 Safety Net entitlement cardholder Concessional or dependant RPBS beneficiary or Safety Net concession cardholder

Patient's name: Emma-Lin Park
Address: 47 Holmes St, Pharmville, Victoria 3052
Date: 02 07 2021
PBS X RPBS Brand substitution not permitted

Salicylic acid and sulfur cream aqueous APF 50 g
Apply at night QTY: 1 RPT: 0

PRESCRIPTION

Doctor to sign original and duplicate



Findings

Grades:

2019 (F2F) vs. 2021 (remote) scores

18.7 ± 0.93 and 18.9 ± 0.56

Qualitative

Commendations

“Really grateful and appreciative that the lecturers were able to find ways to conduct and give instructions for alternative practical compounding sessions right at home for all the students during these testing times, it was actually quite fun at the same time still able to understand a lot of theories and what to expect in a real work setting on compounding solutions for patients in the field”.

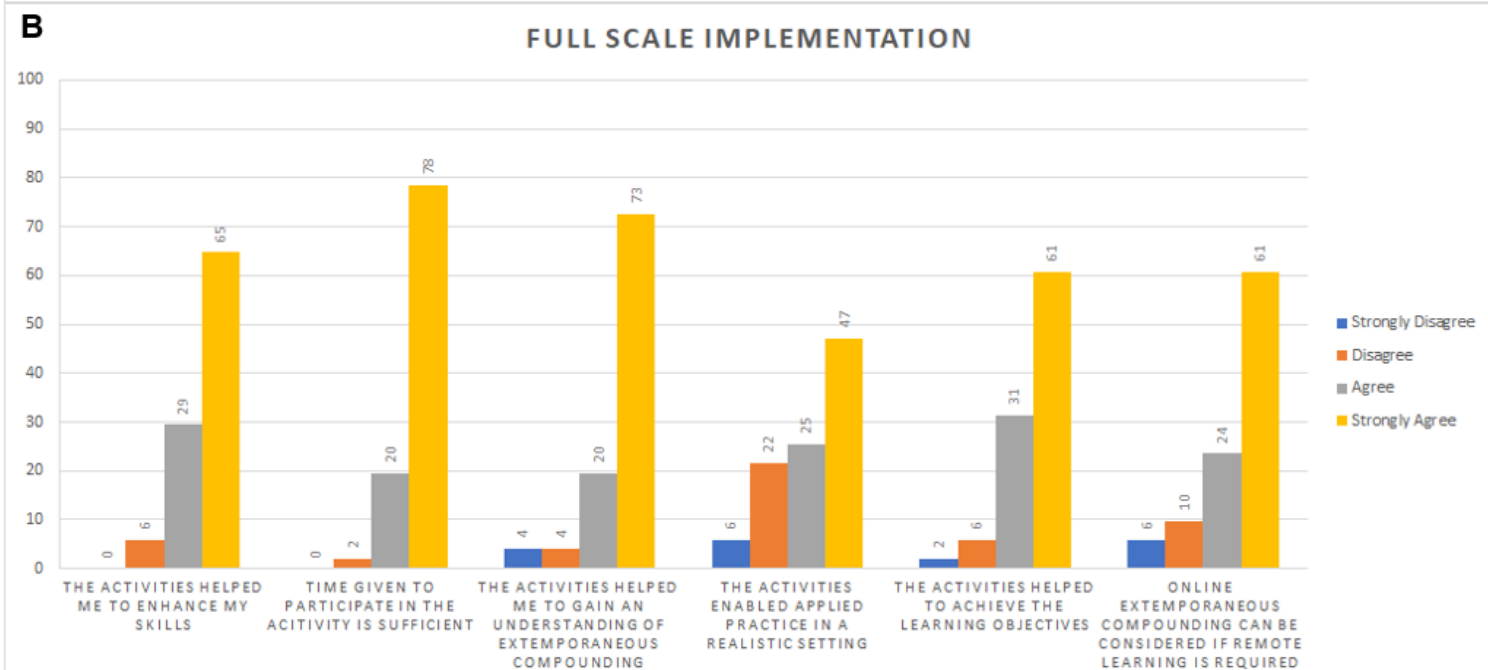
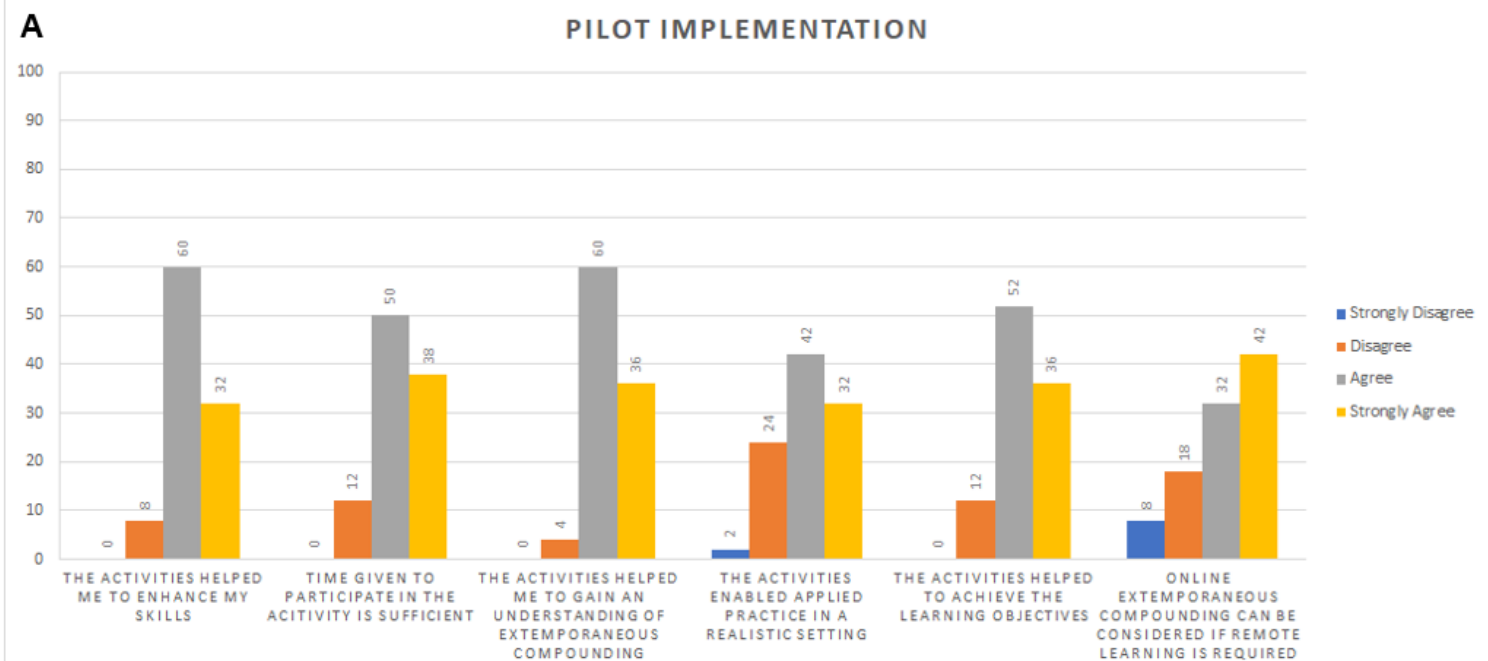
Suggestions:

“[perhaps can implement] a period where there is an intensive lab session month can be done.”

“It would be great to have a physical lab class so students get to use the apparatus and use the real materials and ingredients instead of substitutes. The environment at home is also less conducive for proper preparation and lack of interaction with other course mates as well.”

feedback:

Quantitative feedback



Challenges and Best Practices

Challenges	Best Practices
<ul style="list-style-type: none">• Difficult to assess:<ul style="list-style-type: none">a. Lab safety - home environment not labb. Equipment usage techniques - e.g. accurate measuring, using meniscusc. Product quality - cannot see particles, or feel smoothness of creams• Inconsistent delivery of content in breakout sessions• Logistical challenges in acquiring ingredients and equipment	<ul style="list-style-type: none">• Adequate scaffolding - pre classroom materials, briefings, real-time correction, gradual difficulty ramping with adequate time spacing• Flexibility when dealing with challenges to implementation and assessment• Strategies to deal with accessibility - access to items, financial issues and technology• Ensure consistency of delivery - brief facilitators clearly

Conclusion

- We successfully developed and conducted remote extemporaneous compounding labs for Pharmacy students
- Can be adapted based on different context and needs
- Students generally find the approach useful, and it can achieve very similar learning outcomes
- Challenges on delivery and assessments exist, but these can be overcome by adapting assessments and providing scaffolding

- The approach



Contents lists available at [ScienceDirect](#)

Currents in Pharmacy Teaching and Learning

journal homepage: www.sciencedirect.com/journal/currents-in-pharmacy-teaching-and-learning



te teaching is required

Experiences in Teaching and Learning

Remote extemporaneous compounding lab practical for pharmacy students during the COVID-19 pandemic

Juman Dujaili ^{a,b}, Wee Kiat Ong ^b, Bhuvan KC ^{b,c}, Sarah E. Vordenberg ^d,
Ashlee N. Mattingly ^e, Ronald F.S. Lee ^{b,*}

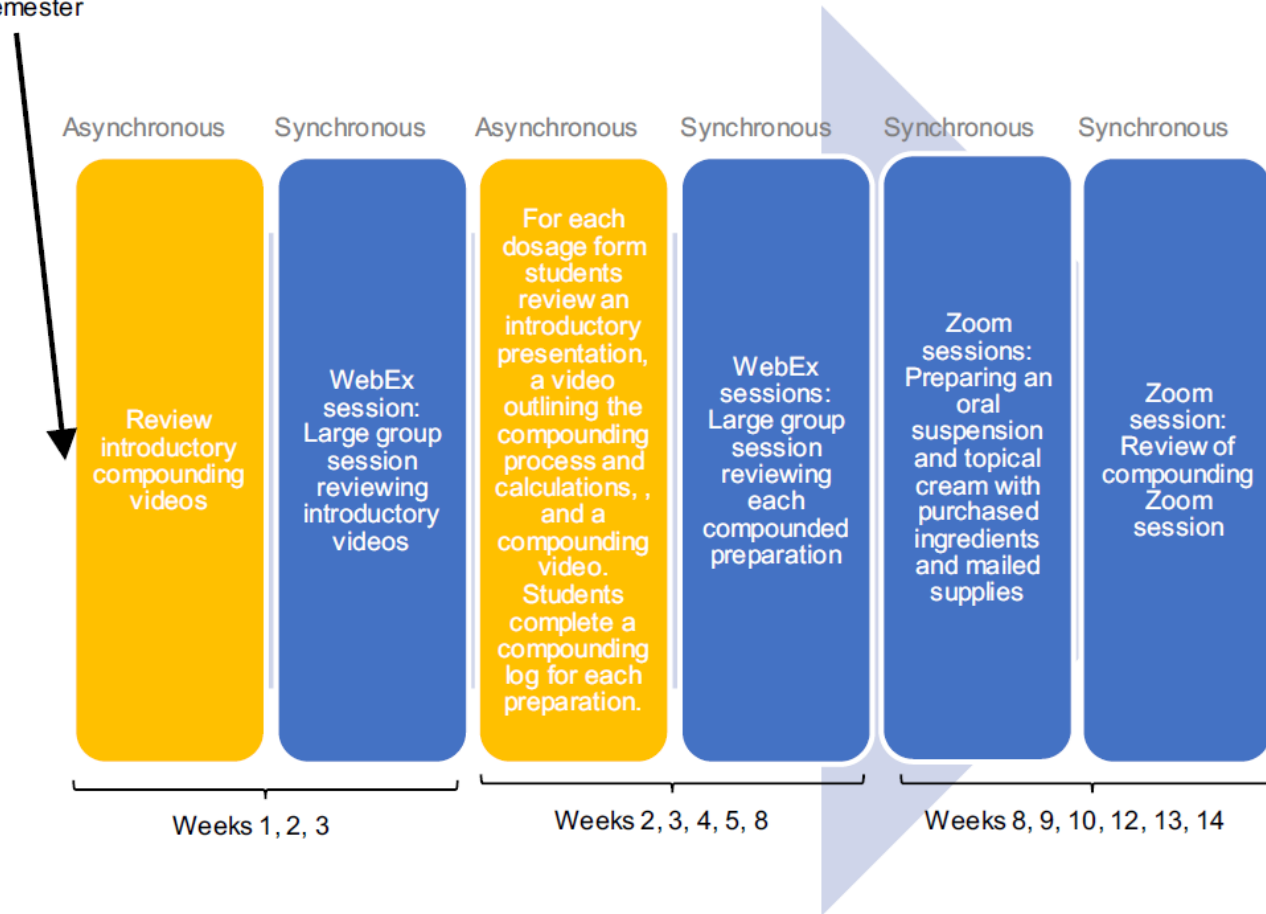
Q&A

Backup slides:

In case someone asks on the implementation in different universities

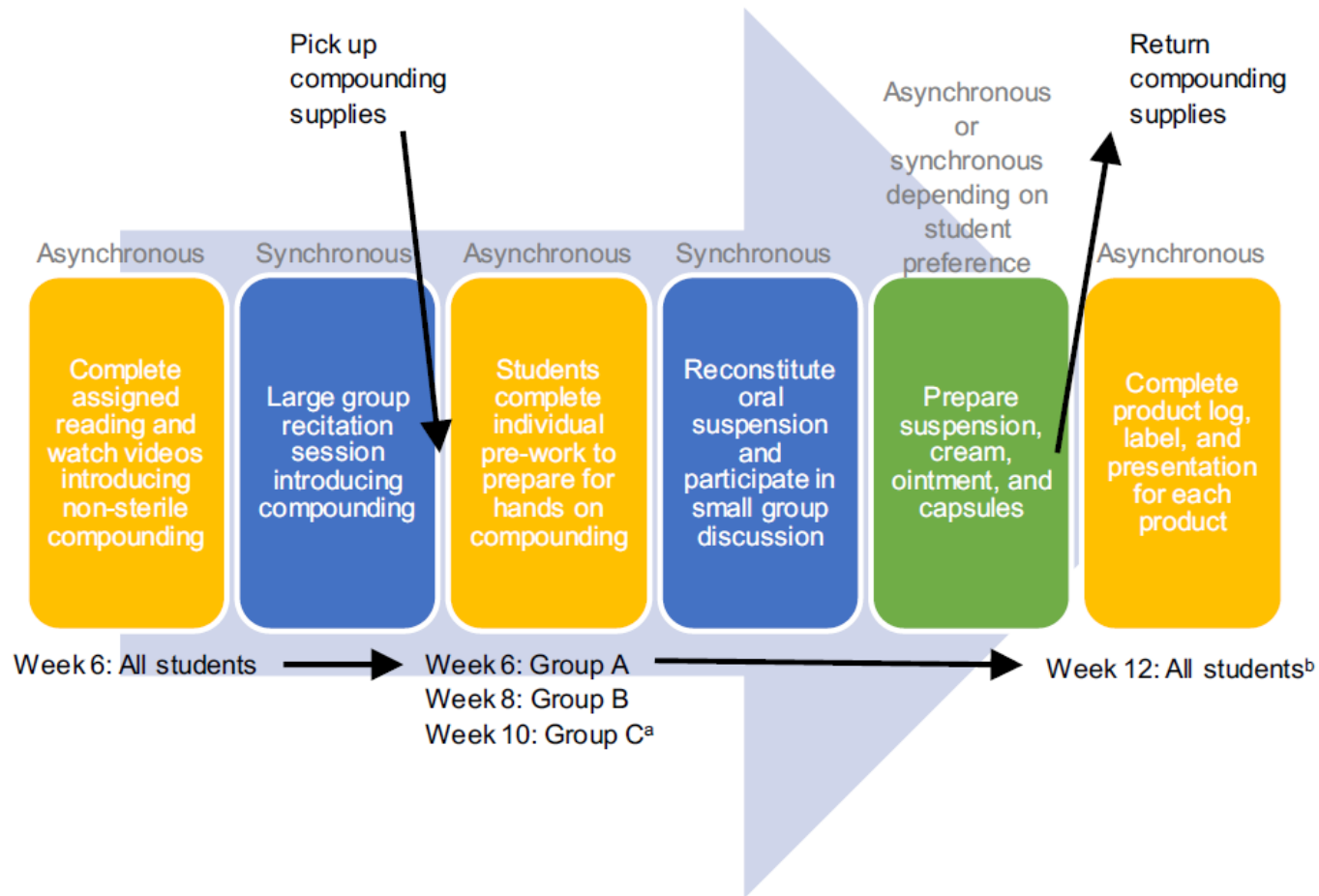
University of Maryland

Students asked to procure a set of equipment for 2 remote compounding sessions and compounding kits containing ingredients mailed to students' home address at the start of the semester



All compounding course materials were available on the learning management system starting at week 1. During Zoom compounding sessions, students prepared extemporaneous preparations with video supervision by a faculty member in a breakout room with 6 students/facilitator.

University of Michigan



^a All compounding course materials were available on the learning management system starting at week 5. Students were required to complete the hands-on activities during the week they were provided with the compounding kit. While students were encouraged to complete the associated activities during their assigned week, they were allowed until week 12 to complete the product log, label using MyDispense, and present demonstrations of how they prepared the suspension and ointment (PowerPoint) and cream and capsules (Flipgrid videos).

^b Students were divided into three groups due to the limited number of compounding kits. Each group of students have a compounding kit for one week and at which point they needed to return the supplies.



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2024 Pharmacy Education Symposium

Interprofessional Education for Health
Profession Trainees at a Regional Campus;
Navigating Barriers for Rural and Medically
Underserved Populations

Prof Stephanie Kiser

UNC Eshelman School of Pharmacy

Interprofessional Education for Health Profession

Trainees at a Regional Campus; Navigating Barriers for

Rural and Medically Underserved Populations



THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Background

- Interprofessional education & practice (IPEC) is an area of major emphasis for health sciences programs.
- Unique challenges tied to geography, scheduling and consistency of attendance occur when attempting to offer high quality experiences on a regional campus.
- An interprofessional team of faculty established a student IPEC team and collaboratively identified educational topics focused on social determinants of health and medically underserved populations.



Topics Included



Geriatric challenges in dental care



Gender Affirming Care



Navigating local resources



Substance use disorder



Rural health disparities



Caring for patients experiencing homelessness



Socioeconomic barriers tied to state and federal medical assistance programs



Purpose

The WHO states that ,*“Interprofessional education occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes.”*

- Create engaging opportunities for students from several health science disciplines to practice Interprofessional Education & Practice competencies.
- Assess learner confidence when working interprofessionally, and collect the perceptions of learners participating in virtual training events.



Methods

- Study included 181 participants from dentistry, nursing, pharmacy, physical therapy, public health, social work, and medicine.
- Two universities represented.
- Participants completed at least one of six interprofessional trainings offered virtually between September 2021 and March 2023.
- Students and faculty performed a self-efficacy scale survey and open-ended questions about key take aways at the completion of each training.

Interprofessional Education (IPE) Assessment PharmD Student IPE Self-Efficacy Instrument

IPEC Core Competencies for Interprofessional Collaborative Practice

- **Competency 1:** Work with individuals of other professions to maintain a climate of mutual respect and shared values. (Values/Ethics for Interprofessional Practice)
- **Competency 2:** Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations. (Roles/Responsibilities)
- **Competency 3:** Communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease. (Interprofessional Communication)
- **Competency 4:** Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable. (Teams and Teamwork)

		I am able to...					
Values/Ethics for Interprofessional Practice		Self-Efficacy Scale*					
VE1.	Place interests of patients and populations at center of interprofessional health care delivery and population health programs and policies, with the goal of promoting health and health equity across the life span.	1	2	3	4	5	6
VE2.	Respect the dignity and privacy of patients while maintaining confidentiality in the delivery of team-based care.	1	2	3	4	5	6
VE3.	Embrace the cultural diversity and individual differences that characterize patients, populations, and the health team.	1	2	3	4	5	6
VE4.	Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions and the impact these factors can have on health outcomes.	1	2	3	4	5	6
VE5.	Work in cooperation with those who receive care, those who provide care, and others who contribute to or support the delivery of prevention and health services and programs.	1	2	3	4	5	6
VE6.	Develop a trusting relationship with patients, families, and other team members.	1	2	3	4	5	6
VE7.	Demonstrate high standards of ethical conduct and quality of care in contributions to team-based care.	1	2	3	4	5	6
VE8.	Manage ethical dilemmas specific to interprofessional patient/ population centered care situations.	1	2	3	4	5	6
VE9.	Act with honesty and integrity in relationships with patients, families, communities, and other team members.	1	2	3	4	5	6
VE10.	Maintain competence in one's own profession appropriate to scope of practice.	1	2	3	4	5	6
Roles/Responsibilities							
RR1.	Communicate one's roles and responsibilities clearly to patients, families, community members, and other professionals.	1	2	3	4	5	6
RR2.	Recognize one's limitations in skills, knowledge, and abilities.	1	2	3	4	5	6
RR3.	Engage diverse professionals who complement one's own professional expertise, as well as associated resources, to develop strategies to meet specific health and healthcare needs of patients and populations.	1	2	3	4	5	6

Interprofessional Education (IPE) Assessment: PharmD Student IPE Self-Efficacy Instrument
Last updated: v2019.09.05 (Zeeman)

Page 1 of 3



Results



Mean scores on the self-efficacy scale ranged from 4.85 to 5.32 on a 6-point scale.



The highest score was for **feeling respected** as a member of the team.



The main themes regarding what participants learned were the importance of each team member, perspectives of other disciplines, and collaboration.



Learners became more acquainted with the knowledge that each team member contributes to the team, such as pharmacists' knowledge about medications and social workers' knowledge about community resources.



Students felt they had learned better ways to work together as a care team and consider the whole patient in the context of surrounding socioeconomic factors.



Key Themes

Importance of Team Members

“Honestly, it was so refreshing to hear all my teammates so surprised at how many pharmacy knows about medications, chronic disease state management, as well as way to address barriers to care surrounding drug prices and adherence...”

, “... it was nice to hear from everybody on the possible middle ground solutions... the team member who was a med student suggested a less invasive procedure that the patient could start that I would not have known to think about.”

Perspectives of Other Disciplines

One respondent stated, “It seems very obvious, but it's not something I considered previously; all disciplines are essentially looking at the same (or very similar) set of information from a client, and we are all interpreting that information with different lens...as it helps to identify the needs of a patient from multiple perspectives.”

One participant highlighted, “...interesting to see how many clinicians (pharmacists, physicians, nursing, PT) aim to address downstream goal while public health students and social workers were more focused on upstream goals.”

Hands-On Learning

“.... with a better understanding of how important it is to include the entire care team when working with patients with complex health needs. I thought this was a very productive use of our time, and we gained a LOT of real-life experience!”

“Though we all treat people, being trained in different disciplines and then working together results in a more complete care for our patients than one discipline alone.”



Promising Findings

Recruitment Tool for Regional Campus

*IPE experience is perceived as a **bonus** to being a part of the regional campus.*

Faculty Support

The faculty across all programs felt supported by the collaborative framework which facilitated a strong level of student interprofessional engagement.

Student Leadership Opportunities

Regional campus students embraced the opportunity to plan, implement and lead interprofessional education efforts which led to cross program promotion and sustainability.

Inclusive and Challenging Topics

Students led the way in selecting topics addressing health equity, inclusive care and challenging patient issues.

Questions?



UNC

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OF PHARMACY**

References

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MONASH University
Pharmacy Education
Symposium 2019

**Start as you mean to go on; ensuring equality, diversity
and inclusion are embedded in an introductory skill
module**

Dr Dan Corbett



2024 Pharmacy Education Symposium

Start as you mean to go on; ensuring equality, diversity and inclusion are embedded in an introductory skill module

Dr Dan Corbett



**QUEEN'S
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PHARMACY

Start as you mean to go on: Ensuring equality, diversity, and inclusion are embedded in an introductory skills module

Dan Corbett, Maurice Hall, Carole Parsons, and Lezley-Anne Hanna
School of Pharmacy, Queen's University Belfast, UK

Why EDI?

- The considered inclusion of EDI training from the outset of MPharm programmes is **crucial**
-

“...essential to both addressing health equity and improving care for underserved populations.”

Arif et al., 2023

“...diversity, equity, and inclusion (DEI) training amongst healthcare professionals reduces biases that contribute to health disparities.”

Tillman et al., 2022

Why EDI?

- The considered inclusion of EDI training from the outset of MPharm programmes is **crucial**

“...greater emphasis on equality, diversity and inclusion to combat discrimination and deal with health inequalities...”

Standards for the Initial Education and Training of Pharmacists – General Pharmaceutical Council (2021)



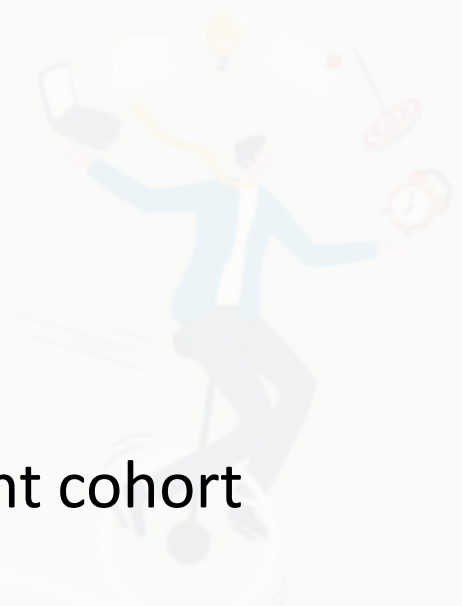
FIP Development Goals



UN Sustainable Development Goals

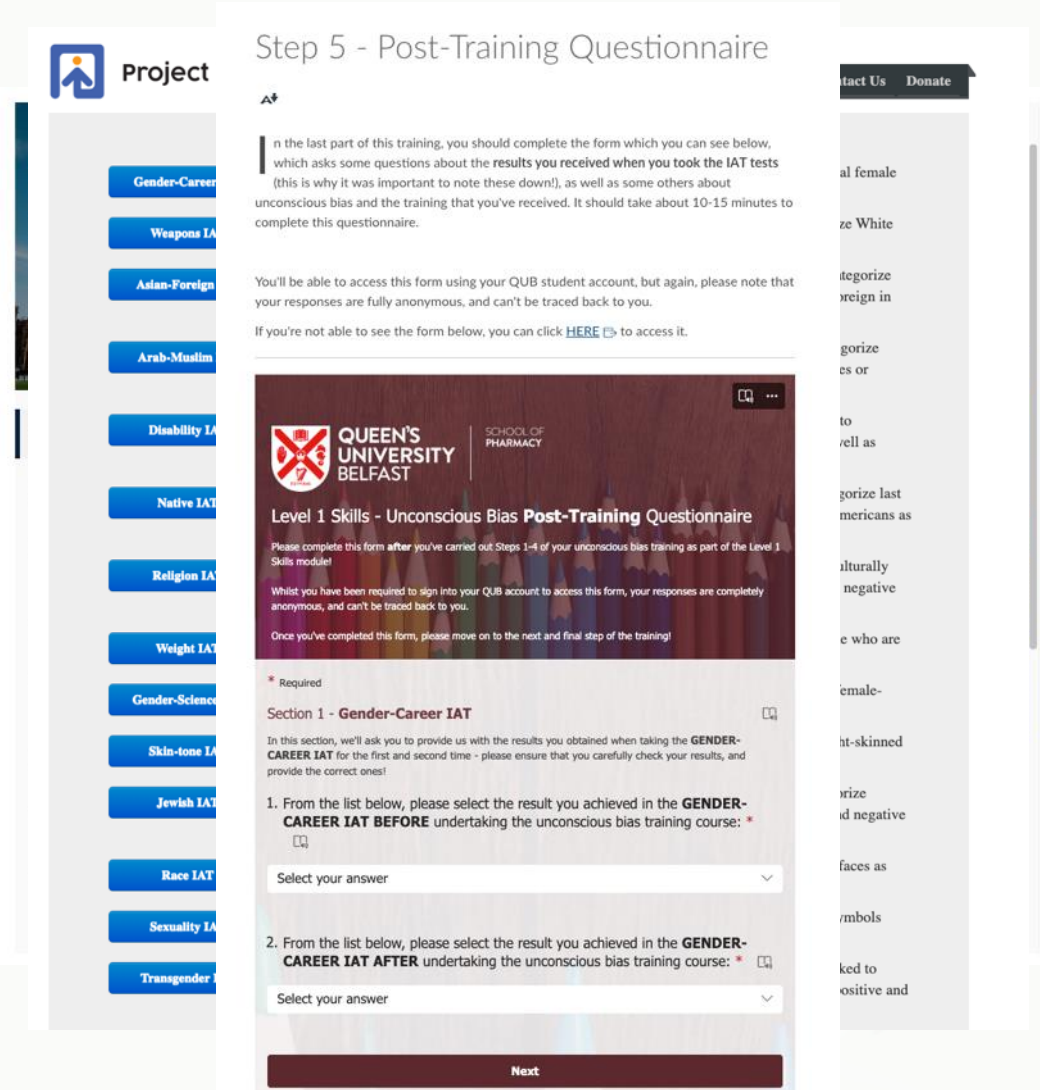
Our approach: Embedding EDI from the outset

- Level 1 “*Skills for Pharmacy*” module presented a useful opportunity
- To both provide **early-stage training**...
- ...and to put this into **practice**
- Development processes included:
 - **Review** of associated professional standards
 - **Incorporation** of previous feedback
 - **Consultation** with School EDI Committee and related staff
- Module rollout: 2023/24 academic year; assessment with student cohort soon thereafter



Delivery Methods

- **Online self-study** (with associated compulsory assessment and related in-person activities):
 - **Unconscious bias training** (developed in conjunction with an e-Learning consultancy)
 - Pre/post-training **Harvard IAT tools**
 - Pre/post-training **questionnaires**



Project

- Gender-Career IAT
- Weapons IAT
- Asian-Foreign IAT
- Arab-Muslim IAT
- Disability IAT
- Native IAT
- Religion IAT
- Weight IAT
- Gender-Science IAT
- Skin-tone IAT
- Jewish IAT
- Race IAT
- Sexuality IAT
- Transgender IAT


Step 5 - Post-Training Questionnaire

✚

In the last part of this training, you should complete the form which you can see below, which asks some questions about the results you received when you took the IAT tests (this is why it was important to note these down!), as well as some others about unconscious bias and the training that you've received. It should take about 10-15 minutes to complete this questionnaire.

You'll be able to access this form using your QUB student account, but again, please note that your responses are fully anonymous, and can't be traced back to you.

If you're not able to see the form below, you can click [HERE](#) to access it.



Level 1 Skills - Unconscious Bias Post-Training Questionnaire

Please complete this form **after** you've carried out Steps 1-4 of your unconscious bias training as part of the Level 1 Skills module!

Whilst you have been required to sign into your QUB account to access this form, your responses are completely anonymous, and can't be traced back to you.

Once you've completed this form, please move on to the next and final step of the training!

* Required

Section 1 - Gender-Career IAT

In this section, we'll ask you to provide us with the results you obtained when taking the **GENDER-CAREER IAT** for the first and second time - please ensure that you carefully check your results, and provide the correct ones!

1. From the list below, please select the result you achieved in the **GENDER-CAREER IAT BEFORE** undertaking the unconscious bias training course: *

Select your answer

2. From the list below, please select the result you achieved in the **GENDER-CAREER IAT AFTER** undertaking the unconscious bias training course: *

Select your answer

Next

Delivery Methods

- Online self-study (with associated compulsory assessment and **related in-person activities**):
 - Welcome talk – student charter, belonging and more
 - United Nations Sustainable Development Goals
 - Group working
 - Code of Conduct/professional behaviour
 - Student support resources and signposting
- Reference to online training made ahead | during | follow-up
- Develop belonging/inclusion via social activities, provision of branded scrubs

Student Development Outcomes – The Numbers

- **≈100%** attendance/engagement with module activities
- Key impacts – unconscious bias training:
 - Understanding of unconscious bias: **63% increase**
 - Increased awareness of unconscious bias: **94%**
 - IAT | Gender-Career | Little to no automatic preference: **13% increase**
 - IAT | Gender-Science | Little to no automatic preference: **18% increase**
 - Satisfaction with training provided: **91%**
 - Agreement with institutional rollout: **93%**



Student Development Outcomes – The **Feedback**

*“...understanding more about it [unconscious bias] and realising how much it **impacts my perception of people.**”*

*“...will benefit me in the future...**treating everyone equally** in whatever field of pharmacy I work in after university.”*

*“...it made me **aware of my biases** (particularly towards my own gender).”*

*“...a good **sense of belonging**...I reckon we got **closer to each other**...”*

Provision of branded scrubs has been well-received

What Does this All Mean?

- The integration of EDI awareness/training activities appears to have been well received, engaged with, and understood
- Explicit/implicit approaches appear to have led to reduced gender biases amongst the cohort
- The success of these smaller interventions/developments set the scene for a deeper and more expansive EDI focus throughout the MPharm
- Initial engagement at the outset of the MPharm programme should equip students to extract full value from those further activities – enhancing outcomes

Start as You Mean to Go On?

- The development of skills and attributes centred on EDI must continue throughout the MPharm programme
- Opportunities to demonstrate these skills have and will continue to be incorporated throughout the Queen's MPharm programme
- Supported by processes which allow skills gaps, inappropriate behaviours, etc. to be addressed

Normalising and fully integrating EDI-focused activities is central to achieving these aims



Thank you!

d.corbett@qub.ac.uk

www.qub.ac.uk/pha

X | Instagram | Facebook / pharmacyatQUB

References:

Arif, S.A., Butler, L.M., Gettig, J.P., Purnell, M.C., Rosenberg, E., Truong, H.A., Wade, L. and Grundmann, O., 2023. Taking action towards equity, diversity, and inclusion in the pharmacy curriculum and continuing professional development. *American Journal of Pharmaceutical Education*, 87(2), p.ajpe8902.

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The background is a solid blue color with a pattern of fine, wavy white lines. Overlaid on this is a dark blue silhouette of the state of Victoria, Australia. A white location pin icon is placed on the map, indicating a specific location. The word 'LUNCH' is written in large, white, sans-serif capital letters across the center of the map.

LUNCH