

Collaborating Across Borders VI
Preparing Pharmacy and
Physiotherapy Students for Practice
Integration of Interprofessional
Reciprocal Peer Teaching

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History – It Starts with Turf

Did you know that upcoming legislation will allow physiotherapists to prescribe NSAIDs?



Really?! Physiotherapists don't have the training to prescribe those medications!



Sure, but don't pharmacists sell canes, crutches, and walkers at pharmacies? What sort of education do they have on the safety and proper use of those products?

Ummmm....

The Learning Need

- What do pharmacists know about AAD?
- Survey distributed through ACP
- N=68
 - 33 (45%) did not receive any training in assisting clients with AAD
 - 3 (5%) of those who received training felt their training was “definitely sufficient” for their current work environment
 - 22 (29%) answered questions pertaining to sizing correctly
 - 33 (43%) correctly answered questions about basic use

One Solution

- Teach the students
- What was currently happening?
- Was it working?



The Study

- Can physiotherapy (PT) students teach pharmacy (Ph) students about AAD?
 - Ethics approval
 - Run in PHARM 437 laboratory
 - Roles
 - Ph students as learners
 - PT students as the teachers
 - Y1 as TA
 - Y2 as peers
 - Content developed by professors in Y1
 - Use, sizing, safety,

The Study

- Pre/Post test (10 MC questions)
 - 3 use of AAD
 - 3 sizing of specific AAD
 - 2 safety
 - 2 prescription of type of device
- Demographics
- Past experience with AAD



The Participants

	Overall (n=220)	Peer led teaching (n=110)	Peer learning groups (n=110)	p value
Age (years), mean(sd)	22.9 (1.5)	22.8 (1.5)	22.9 (1.5)	0.89
Gender (female), n(%)	138 (63)	65 (59)	73 (66)	0.27
Years at university, mean(sd)	4.9 (1.7)	4.6 (2.0)	4.9 (2)	0.46
Prior degree obtained, n(%)	60 (27)	26 (22)	34 (31)	0.37
Past experience working in a pharmacy, n(%)	197 (90)	97 (88)	100 (91)	0.51
Previously assisted client with canes, crutches and walkers, n(%)	63 (29)	31 (28)	32 (29)	0.88 ⁷

The Results

	Pre	Post	Difference
Peer led	3.5 (SD 1.5)	7.1 (SD 1.3)	$p < 0.01$
Peer teaching	2.7 (SD 1.4)	6.4 (SD 1.8)	$p < 0.01$
Difference	$P > 0.05$	$P > 0.05$	

- Mean difference between groups ($p < 0.05$)
 - Peer led
 - 3.5 (SD 1.9)
 - Peer teaching
 - 3.9 (SD 2.2)



The Results

- Poorest performance
 - Sizing of canes
- Best performance
 - Referral to other professionals



The Results

- Roles
 - 99% of Ph students felt pharmacists should actively assist customers with AAD
- Confidence (7-point Likert)
 - Pre 1.8
 - Post 5.7



The Results



- Student comments
- 3 themes
 - IPE experience/Collaboration
 - *“I enjoyed showing my knowledge on these topics and discussing potential opportunities to collaborate for patient care.”*
 - *“Having a good relationship with someone is important!”*
 - learning environment
 - *“The environment was enjoyable and light. Peer interaction made what could have been a dry topic more fun.”*
 - *“I actually learnt from teaching”*
 - Skill development, identity
 - *“The types of techniques that do and do not work well in teaching”*

We Listened

- It's not fair that we are just the learners – we could teach the PT students a lot!



- Examples given: analgesics, diabetes medications, inhaler devices, etc.

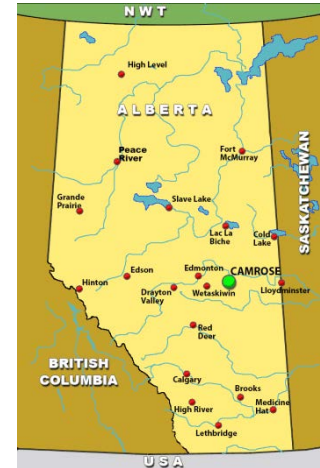
The Next Study

- Can Ph students teach PT students about inhalers? What is the experience like for the learner and the teacher?
 - Ethics approval
 - Run in PHARM 430 then 330 laboratory
 - Roles
 - Ph students as teachers
 - PT students as learners
 - Content developed by students
 - Use, cleaning, therapeutics

The Study – Who and What We Added



- Added a pre/post test for the teacher
- Based on confidence, experience, performance
- Introduced videoconferencing for remote PT students (Camrose, Calgary)



The Findings

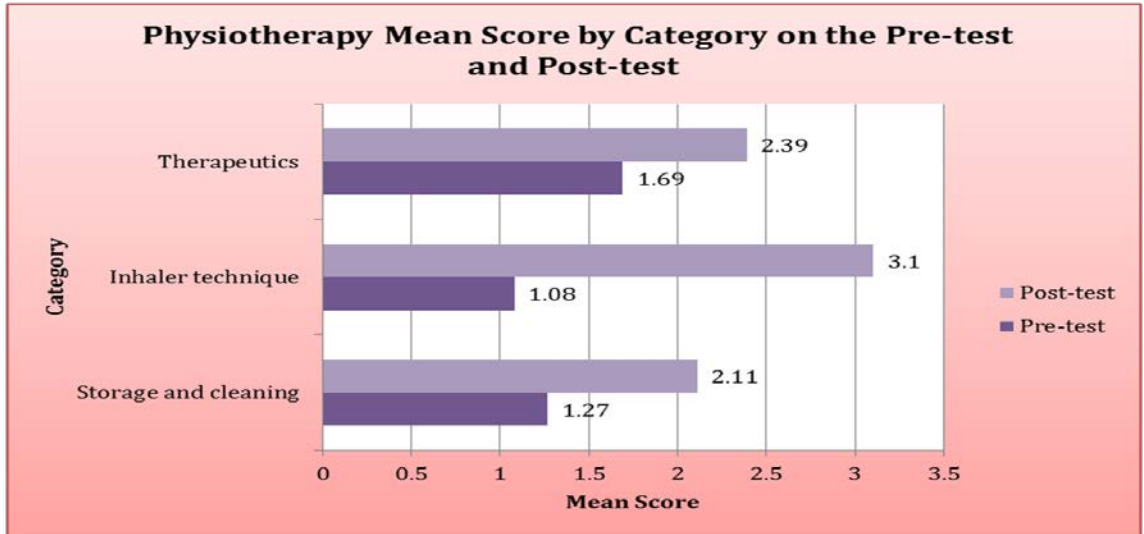
- 2 years
- Overall participants who completed pre or post
 - Ph N=197
 - PT N=143
- Completion of pre and post
 - Ph N=188
 - PT N= 142

The Results

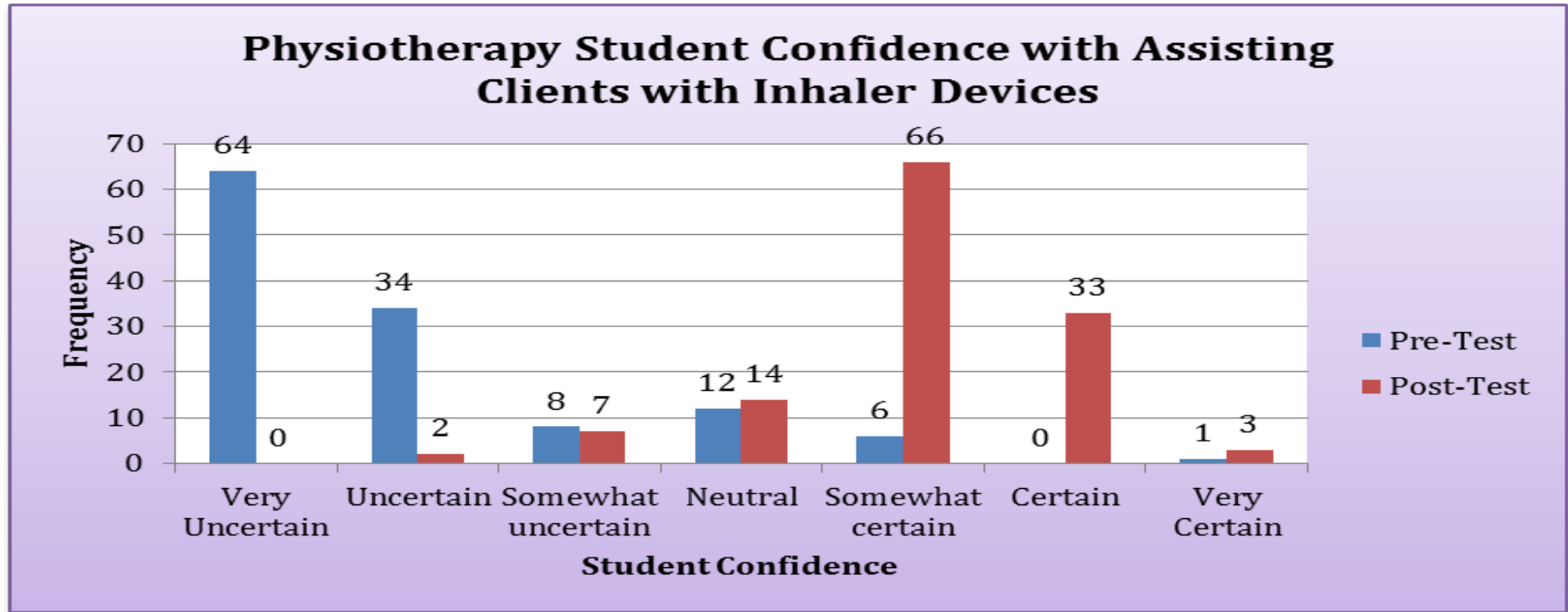
	Pharm N=188	PT N=142
Age (years), median	22	24
Gender (female), n(%)	122 (64.9%)	104 (73.2%)
Prior degree obtained, n(%)	61 (32.4%)	142 (100%)
Past experience working in a pharmacy, n(%)	162 (86.2%)	N/A
Previously assisted client with inhalers, n(%)	N/A	MDI 7 (4.9%) Spacer 3 (2.1%) Discus 3 (2.1%) Turbuhaler 0 Handihaler 1 (0.7%) Nebulizer 7 (4.9%)

The Results

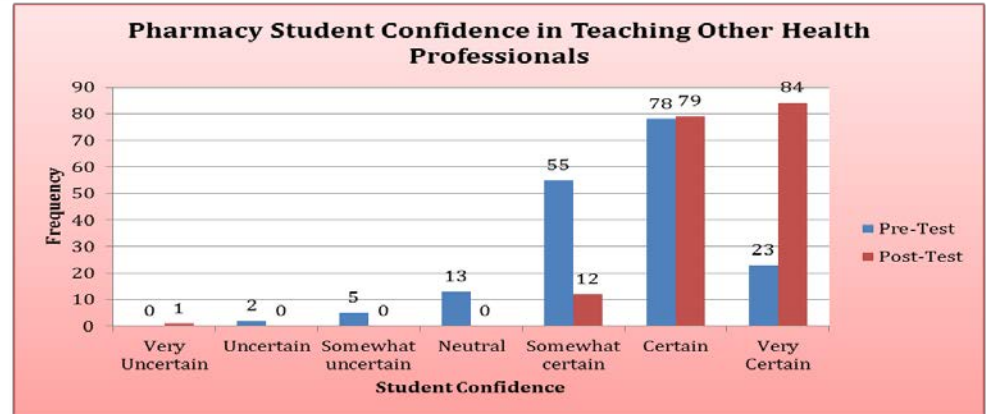
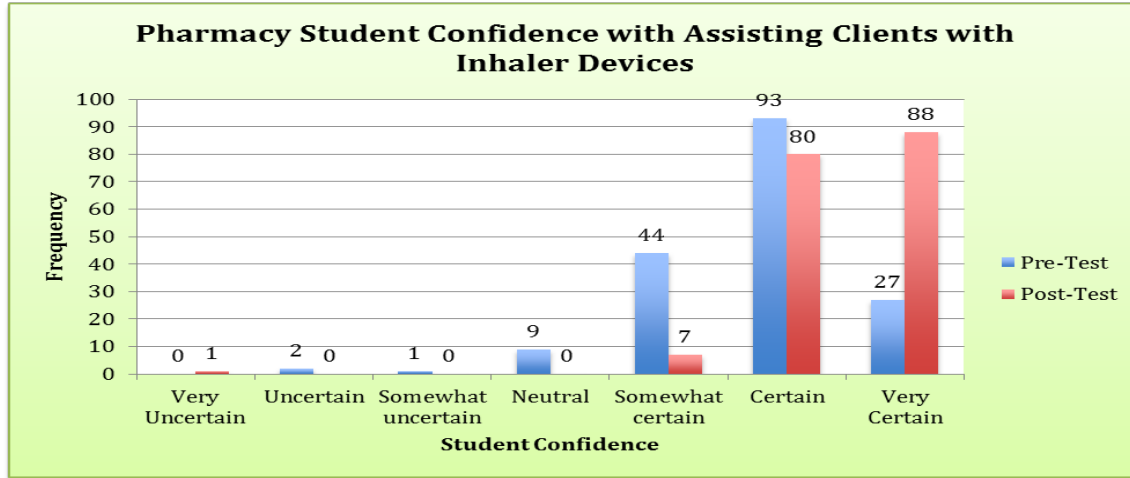
- Overall PT student scores
 - Pre = 4.0 (SD 1.4)
 - Post = 7.6 (SD 1.3)



The Results – PT Confidence



The Results – Ph Confidence



Students as Research Participants

- They want to look good
 - i.e. cheating on pre-test



- Gaming and competition drive performance
- Incentives work

What the Instructors Learned

- Peer teaching requires more effort, structure, and support than delivering didactic lessons
- IP activities require an extraordinary amount of administrative effort to coordinate programs, instructors, courses, classrooms, etc.
- Research is important to validate new teaching strategies
- The learning experience trumps the content



Implications of the Study

- IPE builds appreciation for other team members that exceeds IntD410
- Peer teaching is important and teaches different skills than other IPE experience
- Learning can be active and fun for pharmacy students

Where We Are and Next Steps

- IP-Peer teaching is now an embedded activity within the 330 and 430 labs and PT courses
- PT and Ph programs have a stronger link
- IP activities with others are being developed
 - Nursing simulations
- Peer teaching activities led by APSA and other student groups (e.g. inhaler teaching)

Questions?