

# Interprofessional Learning - a Cardiff perspective

Dai John & Phil Routledge



# THE PRESCRIBING PROCESS



## *Prescribing*

Decide if  
prescription  
indicated?

Discuss  
choice with  
patient  
(whenever  
possible)

Check reference  
source(s) & write  
prescription for  
appropriate dose/  
/route/duration

## **PRESCRIBING PARTNERSHIP**

*Hughes D and Routledge PA. A Prescribing Partnership.  
Public Service Review: Health and Social Care 2013; 35: 65-67*

Select/ prepare/  
dispense correct  
medicine at  
appropriate dose

Administer correct  
dose of medicine  
by correct route to  
correct patient

## *Dispensing*

## *Administration*

*Routledge PA. Safe prescribing: a titanic challenge. Br J Clin Pharmacol. 2012; 74: 676-84.*

# Drivers



## Prescribing Skills Assessment

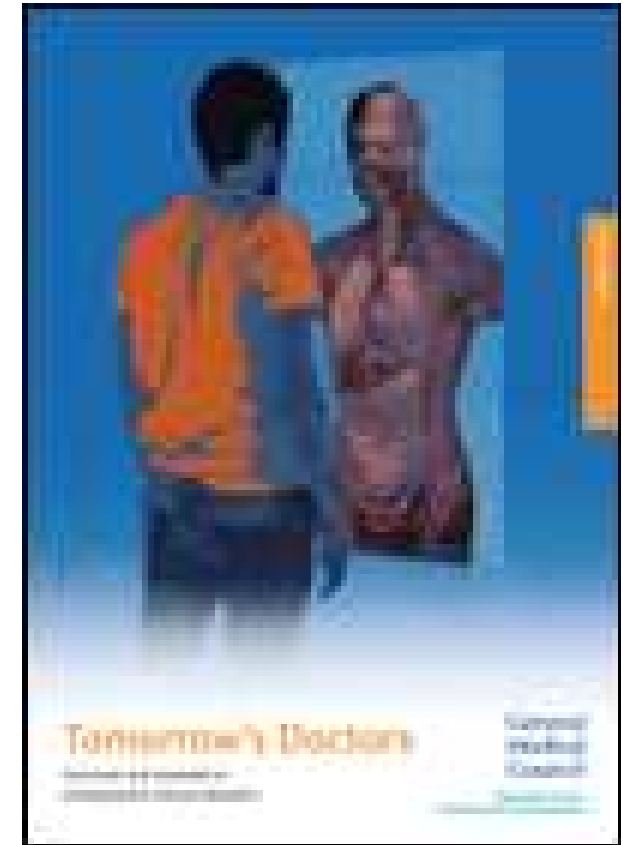


General  
Pharmaceutical  
Council

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General  
Medical  
Council

Regulating doctors  
Ensuring good medical practice



An in depth investigation into causes of prescribing errors by foundation trainees in relation to their medical education - EQUIP study  
Dornan *et al.* 2009

# Developing the IPE Session

**Several meetings between Medicine and Pharmacy staff.**

**Willingness on both sides to move forward IPE agenda.**

**A number of therapeutics/prescribing cases were developed, discussed by staff and piloted with year 5 medicine and pre-reg pharmacy graduates.**



**Three cases were selected for use in a 2hr time-tabled session with 3<sup>rd</sup> or 4<sup>th</sup> year Pharmacy and 3<sup>rd</sup> year Medicine undergrads.**



# Acknowledgements



**Gary Baxter**

**John Bligh**

**Pamela Bradley**

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**James Coulson**

**Helen Day**

**Rhian Deslandes**

**Frances Field**

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**Jamie Hayes**

**Elizabeth Hughes**

**Louise Hughes**

**Efi Mantzourani**

**Leanne Roberts**

**Helen Sweetland**

**John Thompson**

**Simon Wilkins**

**All study participants,  
including those in pilot.**

**Anesha Premji**

**Andy Jenkins**

# The IPE Session - Activities

**Working as inter-professional pairs, students role-played alternate professional and patient in medicines-history taking**

**After each exercise students fed back to each other**

## **Outcomes / End points of Cases**

**Case 1 - stopping one antihypertensive & writing a prescription for new antihypertensive**



**Case 2 – identification & reporting of an adverse drug reaction**

**Case 3 - identification and resolution of drug-drug interaction**





# Example Activity

## Case Study 1

You are the GP/pharmacist.

Elicit and record in the box below, a full medicines history for Mr/Ms Morgan, a 45 year-old office worker from Caerphilly.

They have had asthma for the last 10 years and hypertension diagnosed in the last year.

They are consulting you because of a worsening in their asthma in the last two weeks.

Patient later develops gout. Need to identify alternative antihypertensive.

# Aim

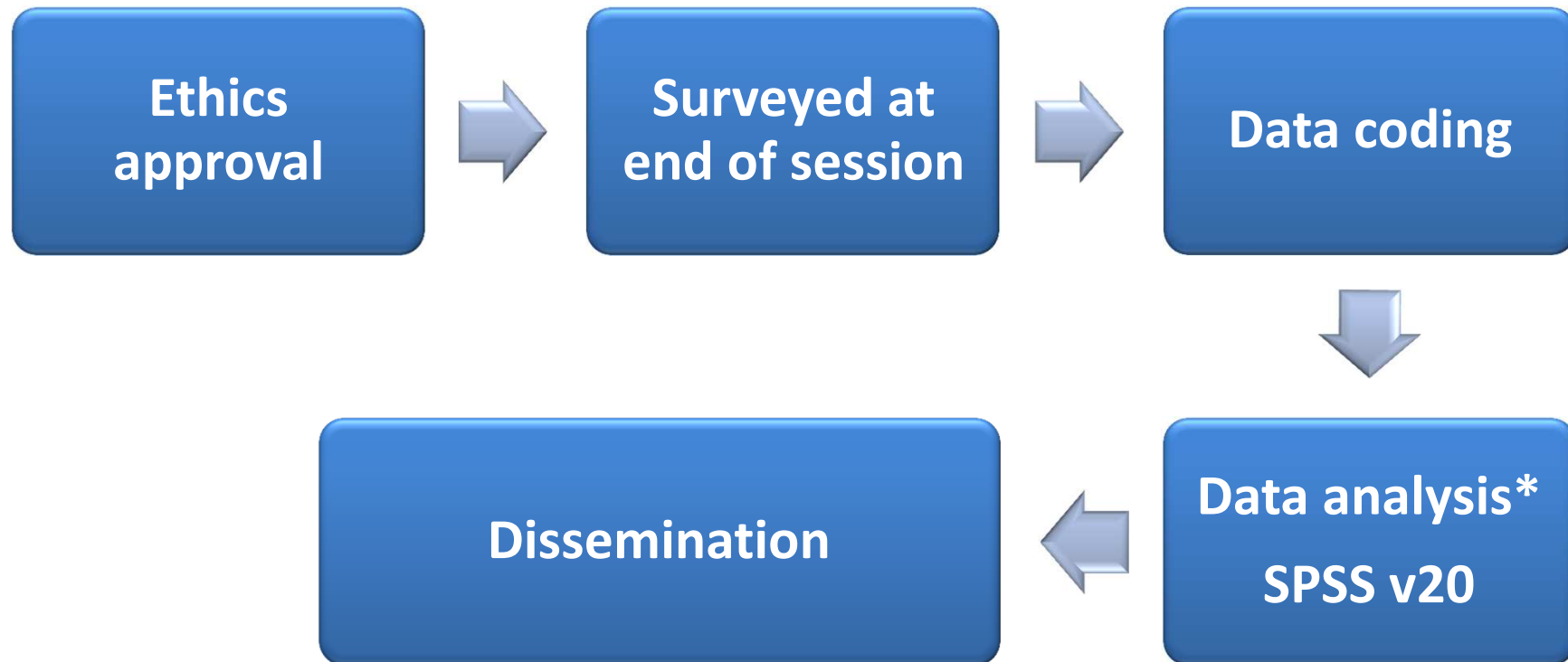
**To obtain undergraduate pharmacy and medical students' views about an IPE session on aspects of therapeutics and prescribing**





# Method

**Pre-piloted questionnaires (5-point Likert-scale) and open ended questions**



**\*Kruskal-Wallis, then Mann-Whitney between each pair if  $p \leq 0.05$**

# The Sessions - 1

## PILOT

September 2011

Medic Yr 5 and Pharmacy Pre-reg (Yr 5)

2011/12

Medic 3 with Pharmacy 3 or Pharmacy 4

2012/13

Medic 3 with Pharmacy 3 or Pharmacy 4

## PARTICIPANTS

>700 'students'

12 faculty

# The Sessions - 2

**For this presentation we report data from  
2012/13**

November 2012 **Pharmacy 4\*** / **Medic 3**

February 2013 **Pharmacy 3** / **Medic 3**

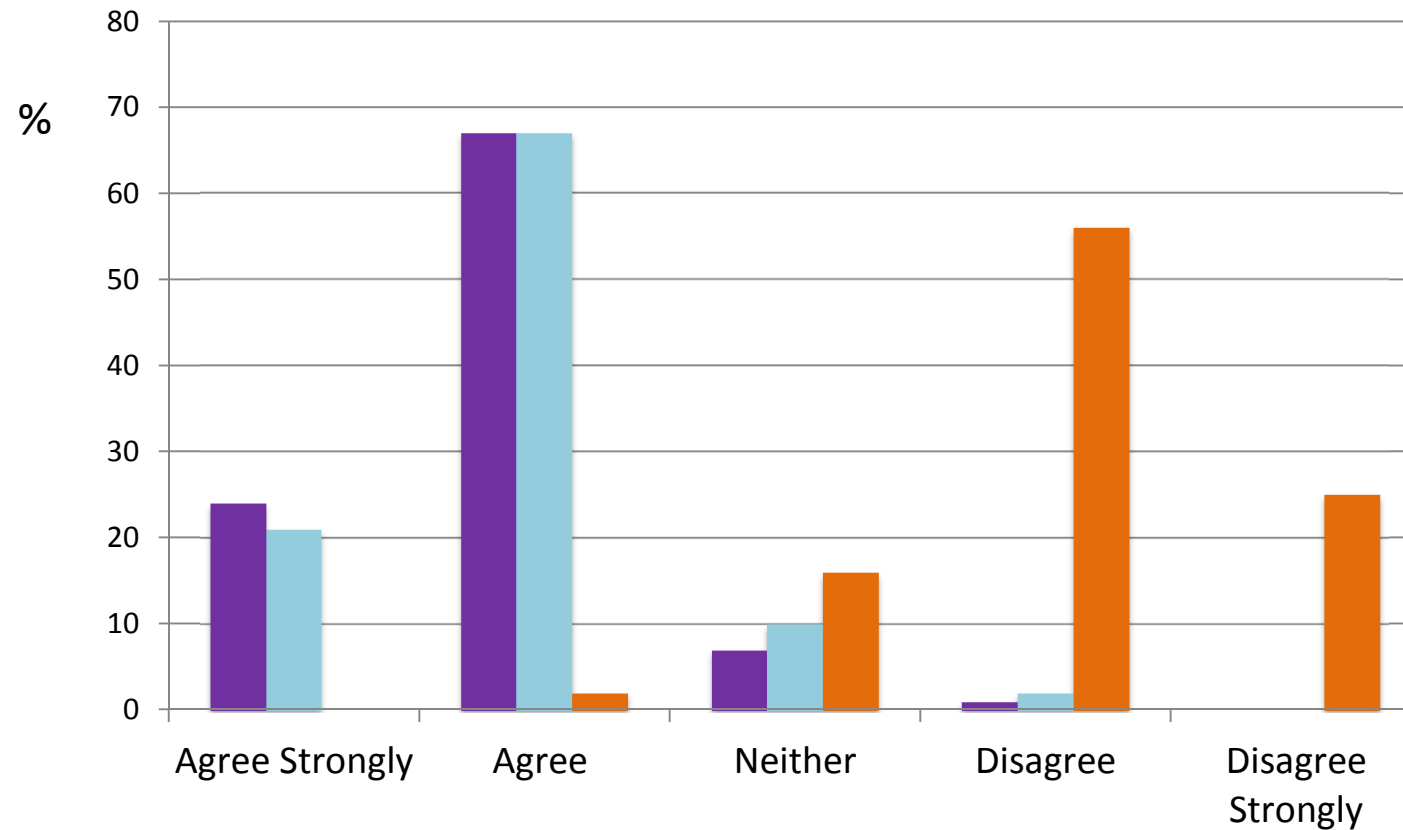
February 2013 **Pharmacy 3** / **Medic 3**

\* This cohort participated as **Pharmacy 3** in 2011/12

## Response Rate 2012/13

380 / 393 of participating students completed the  
evaluation (97% response)

# Results - 1



Overall, the session was ... **useful**, **enjoyable**, **boring**

# Discussion

**IPE on therapeutics and prescribing between student medics and pharmacists was valued**

**Most students reported benefits from the session**

- **gaining therapeutic knowledge**
- **working and learning from another profession**

**More IPE should be undertaken, including the development of appropriate IPE with other professions**

**Those involved in developing and delivering IPE have also learnt with, from and about each other**



INTERPROFESSIONAL EDUCATION CONFERENCE  
**LEARNING AND WORKING TOGETHER  
TO IMPROVE SAFETY  
THROUGH BETTER PRESCRIBING**

**May 17<sup>th</sup> 2013**

**STOP PRESS. Due to sponsorship  
EARLY BIRD Delegate Rates now:  
Standard: £80 F/T Student: £70**



This one-day conference will cover important issues around patient safety and how working together can improve patient safety through better prescribing. It is open to anyone involved in or interested in the interprofessional education and training of students and practitioners in healthcare education.

**Workshops**

There will be opportunities for you to be involved in, or facilitate, hour-long workshops on a range of issues in keeping with the conference theme, such as interprofessional education, patient safety, prescribing and simulation.

**Deadline for workshop suggestions: January 31<sup>st</sup> 2013.**

**Abstracts and Posters**

Submitted abstracts should relate to original, previously unpublished work. Abstracts accepted for presentation will be published with an ISBN and will be displayed as posters at the conference. Instructions for authors will be available in due course.

**Deadline for abstract submission: January 31<sup>st</sup> 2013.**

**<http://tinyurl.com/17May2013IPE>  
[www.cardiff.ac.uk](http://www.cardiff.ac.uk)**

**Venue: Cardiff Hilton Hotel, Kingsway, Cardiff, CF10 3HH**

**Speakers to include:**

**Dr Ruth Hussey OBE**

Chief Medical Officer for Wales  
Medical Director for NHS Wales  
Welsh Government

**Professor Nick Barber**

Professor of the Practice of Pharmacy,  
University College London School of Pharmacy  
Director of Research and Evaluation  
The Health Foundation

**Professor Gary Baxter**

Head of School of Pharmacy & Pharmaceutical Sciences,  
Cardiff University

**Professor Hugh Barr**

President of the UK Centre for the Advancement of  
Interprofessional Education (CAIPE)

**Professor John Bligh**

Dean of Medical Education,  
School of Medicine, Cardiff University

**Pamela Bradley**

Senior Lecturer for Interprofessional Education  
Institute of Medical Education, School of Medicine  
School of Pharmacy & Pharmaceutical Sciences  
Cardiff University

**Professor Tim Dorman**

Professor of Medical Education,  
Maastricht University, The Netherlands

**Dr Dai John**

Reader in Pharmacy Education and Practice,  
School of Pharmacy & Pharmaceutical Sciences,  
Cardiff University

**Professor Simon Maxwell**

Professor of Clinical Pharmacology,  
University of Edinburgh

**Professor Phil Routledge**

Professor of Clinical Pharmacology,  
School of Medicine,  
Cardiff University  
President of the British Pharmacological Society



# INTERPROFESSIONAL LEARNING

## APPROACHES TO THERAPEUTICS AND PRESCRIBING



HOW	WHO	WHEN	WHERE	AUTHORS
Case-based Learning	Medical students Pharmacy students	3 <sup>rd</sup> year 3 <sup>rd</sup> / 4 <sup>th</sup> year	Cardiff	<i>John et al (3,4)</i> <i>Jenkins et al (2)</i>
“ “	Medical students Pharmacy students	2 <sup>nd</sup> year 3 <sup>rd</sup> year	Newcastle/ Sunderland	<i>Randles et al (9)</i>
“ “	Medical students Pharmacy students	Final year Final year	Cork	<i>McCague et al (30)</i>
“ “	Medical students Pharmacy students	2 <sup>nd</sup> / 4 <sup>th</sup> year 2 <sup>nd</sup> / 4 <sup>th</sup> year	Liverpool	<i>Riley et al (33)</i> <i>Cutler et al (34)</i>



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Lectures, Therapeutic "ward rounds" & Case -based Learning	Medical students Pharmacy students	4 <sup>th</sup> year 4 <sup>th</sup> year	UCLH, London	<i>Sofat &amp; Jani (12)</i>
Interactive workshop and ward-based IPL	Medical students Pharmacy students	Final year Final yr/prereg	Leicester	<i>Anderson et al (43)</i>
Numeracy skills teaching/assessment	Medical students Pharmacy students	1 <sup>st</sup> year 1 <sup>st</sup> year	Belfast	<i>Bradley et al (13)</i>
Formative OSCE	Medical students Pharmacy students	5 <sup>th</sup> year	Norwich	<i>Bowker et al (17)</i>



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Actor/ patients	Nurses Pharmacists	Post- qualification	Cardiff	<i>James et al (31)</i>



# INTERPROFESSIONAL LEARNING



- **IPL can be facilitated throughout degree programmes and also at postgraduate level using a variety of approaches**





# INTERPROFESSIONAL LEARNING



## THERAPEUTICS/ PRESCRIBING EDUCATIONAL OPPORTUNITIES

HOW	WHO	WHEN	WHERE	AUTHORS
Prescribing Competency programme	Medical Students	5 <sup>th</sup> year	Betsi Cad'r	<i>Nicholson &amp; Roberts (1)</i>
Antimicrobial prescribing	Dentists	F1 & later	Cardiff	<i>Barnes (5,6)</i>
Targeted teaching materials	Medical students	1 <sup>st</sup> -3 <sup>rd</sup> yr (4yr)	Swansea	<i>Day &amp; Williams (7)</i>
Targeted materials in medication safety/ prescribing.	Medical, pharmacy & nursing students	Latter stages	Sunderland	<i>Clemerson (37)</i>
Certificated teaching programme	Pharmacists	Post-qualification	Auckland/ Otago	<i>Shaw et al (8)</i>
Prescribing training	Speech & Language Therapy Staff (SLT)	Post-qualification	Cwm Taf HB	<i>Nelms &amp; Collins (20)</i>
Antibiotic prescribing audit	Doctors	2 <sup>nd</sup> / 4 <sup>th</sup> yearr	Merthyr Tyd.	<i>Allman (10)</i>
Prescribing Scenarios	Medical students	5 <sup>th</sup> year	Dundee	<i>McGuire (11)</i>
Drug calculation teaching	Medical students	Final (4 <sup>th</sup> year)	Swansea	<i>Day &amp; Williams (14)</i>
Clinical medication review	Doctors	Post-qualification	Cwm Taf	<i>Hughes (22)</i>
Local prescribing guidelines	Doctors	Post-qualification	Oxford	<i>Al Douri (23)</i>
Prescribing skills ibook®	All professions	All years	Manchester	<i>Fattah et al (35)</i>



# INTERPROFESSIONAL LEARNING



- IPL can be facilitated throughout degree programmes and also at postgraduate level using a variety of approaches
- **There are many other learning opportunities that can be adapted to IPL**

# INTERPROFESSIONAL LEARNING



## ASSESSMENTS & AUDITS IN THERAPEUTICS/ PRESCRIBING



HOW	WHO	WHEN	WHERE	AUTHORS
Numeracy	Medical students Pharmacy students	1 <sup>st</sup> year 1 <sup>st</sup> year	Cardiff	<i>Coulman et al (15)</i>
Prescribing skills	Doctors	F1	Kent/ Surrey/ Sussex	<i>Burke-Adams et al (16)</i>
“Pre-prescribing” prescription writing	Medical students	Final year	Edinburgh	<i>Dearden (38)</i>

# INTERPROFESSIONAL LEARNING



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HOW	WHO	WHEN	WHERE	AUTHORS
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Prescribing skills	Doctors	F1	Kent/ Surrey/ Sussex	<i>Burke-Adams et al (16)</i>
"Pre-prescribing" prescription writing	Medical students	Final year	Edinburgh	<i>Dearden (38)</i>
Prescribing errors in MAU/SAU	Doctors	Hospital Drs post- registration	Cardiff	<i>Power et al (24)</i>
Prescribing errors in orthopaedics	Doctors Non-medical prescribers	Post-registration	Swansea	<i>Harper (25)</i>
Prescribing errors in hospital	Doctors	Post-registration	Cardiff (UHW)	<i>Bullock et al (26)</i>
Discharge medication	Doctors	Hospital Drs post- qualification	Colchester	<i>Yemm et al (27)</i>
Prescription interventions	Doctors	GPs post- qualification	South Wales	<i>Roberts (28)</i>

# INTERPROFESSIONAL LEARNING



- IPL can be facilitated throughout degree programmes and also at postgraduate level using a variety of approaches
- There are many other learning opportunities that can be adapted to IPL
- **Assessment of, and audits of prescribing standards are vital in gauging progress**



# INTERPROFESSIONAL LEARNING



## BROADER ASPECTS OF IPL



HOW	WHO	WHEN	WHERE	AUTHORS
Clinical Skills training	Pharmacy students	Final year		<i>Bradley et al (29)</i>
Stroke Seminar/ Workshop: Patient story & Break-out groups	Medical, pharmacy, nursing, podiatry, SLT, physiotherapy, BMS, Dietetics and Social Work	Final year	Cardiff Metropolitan University	<i>Squire et al (18)</i>
“Ask one Question” Fundamentals of care	Medical students Nursing students	3 <sup>rd</sup> year 2 <sup>nd</sup> year	Cardiff University	<i>Kibble et al (19)</i>
Health Literacy	Information for patients	NA	Manchester	<i>Rusby (21)</i>



# INTERPROFESSIONAL LEARNING



## WORKSHOPS IN IPL

		AUTHORS
Prescribing Skills Awareness Workshop	Manchester, Keele & NICE	<i>Wilson et al (39)</i>
Simulation-based Learning	Cardiff & <i>Laerdal</i>	<i>Bradley et al (40)</i>
Technology and antimicrobial stewardship	JAC & ICNet	<i>Watkins (41)</i>
Interprofessional educational models	Aberdeen	<i>Diack et al (42)</i>
IPL on polypharmacy and the elderly	Leicester	<i>Anderson et al (43)</i>

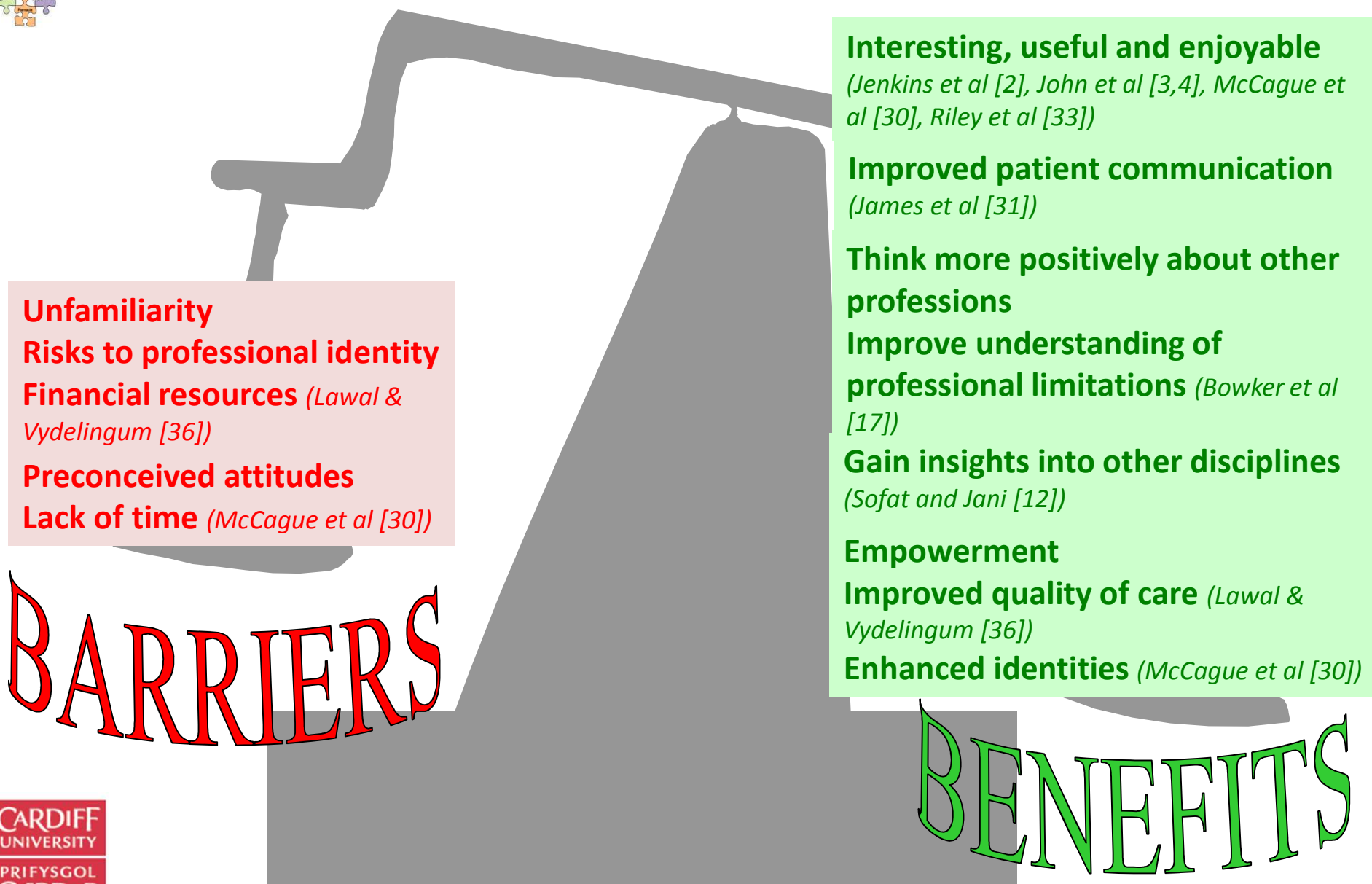
# INTERPROFESSIONAL LEARNING



- IPL can be facilitated throughout degree programmes at also at postgraduate level using a variety of approaches
- There are many other learning opportunities that can be adapted to IPL
- Assessment of, and audits of prescribing standards are vital in gauging progress
- **IPL has a much broader applicability in healthcare**



# INTERPROFESSIONAL LEARNING



An aerial photograph of a coastline. The left side of the image shows a deep blue body of water. The right side shows a green, hilly landscape with some brown patches, possibly indicating erosion or different vegetation. A white, winding path or road runs along the coast, separating the water from the land. The text "THANK YOU" is overlaid in large, white, bold letters across the top of the image.

# THANK YOU

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