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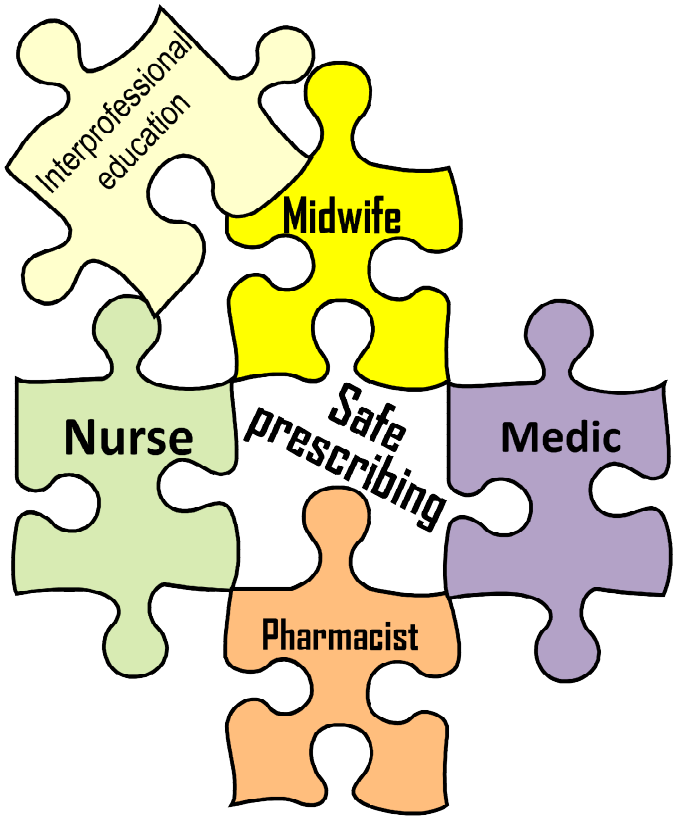

LEARNING AND WORKING TOGETHER TO IMPROVE SAFETY THROUGH BETTER PRESCRIBING

Friday 17th May 2013

Cardiff Hilton Hotel

Organising Committee

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Acknowledgements

SPEAKERS

DR RUTH HUSSEY

Since 2006 Dr Hussey has been Regional Director of Public Health/Senior Medical Director for NHS North West England. She also led the Department of Health in the North West region. From April 2011 she was seconded to the Public Health England Transition Team at the Department of Health. Here she led the transition of the public health function from the NHS to local government.

From April 2002 to July 2006, Dr Hussey held the posts of Director of Health Strategy/Medical Director at Cheshire and Merseyside Strategic Health Authority. Between November 2005 and June 2006 she was also Acting Director of Public Health/Medical Director at Greater Manchester Strategic Health Authority. Prior to this, between 1991 and 2002, she was the Director of Public Health for Liverpool.

In addition, Dr Hussey coordinated the establishment of a Masters of Public Health degree course. She did this whilst lecturing at the University of Liverpool in the late 1980s. She continues to have links with several Universities in the North West Region.

Dr Hussey has been committed to reducing health inequalities throughout her working life. She has established a partnership based approach to this work in the North West. She advocates integrated approaches to improving health and delivering high quality health and social care. She holds a strong commitment to involving the public in their health and health care.

PROFESSOR NICK BARBER

Nick Barber lectured as a pharmacologist before entering hospital pharmacy, where he was a chief pharmacist at the National Heart Hospital and at Oldchurch General Hospital. He became a Professor at UCL School of Pharmacy in 1992 and founded their Department of Practice and Policy. In 2012 he also became Director of Research at The Health Foundation. He has published over 160 peer reviewed papers, particularly in the areas of medication safety, technology assessment, patient adherence and pharmacy practice; this work led to the creation of the national New Medicine Service in community pharmacies. He has been a visiting Professor in Patient Safety at Harvard Medical School, has presented the BBC2 series 'The Victorian Pharmacy' and is a former Vice-President of the Royal Pharmaceutical Society of Great Britain.

PROFESSOR TIM DORNAN

Tim Dornan now works as an education researcher at Maastricht University having trained as an internist and endocrinologist and worked in the UK National Health Service for over 30 years. His interests include clinical workplace learning, sociocultural theory, qualitative research, and bibliographic methodology.

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PROFESSOR SIMON MAXWELL

Simon Maxwell is Professor of Student Learning/Clinical Pharmacology and Director of Clinical Pharmacology & Therapeutics teaching at the University of Edinburgh, where he has been active in developing e-Learning strategies to support education in this area. His clinical responsibilities include supervision of acute medical admissions and the management of outpatients at increased

cardiovascular risk. He is Chair of the British Pharmacological Society (BPS) Prescribing Committee and was lead author of the core curriculum for CPT teaching in UK medical schools. He is Chair of the European Association of CPT (EACPT) Education Committee and Secretary of the International Union of Pharmacology and Clinical Pharmacology (IUPHAR) Education Section. He has recently been a member of the NICE drug appraisals committee, is currently a member of the Scottish Medicines Consortium, the Medicine and Healthcare products Regulatory Agency's (MHRA) Pharmacovigilance Expert Advisory Committee and is Medical Director of the Scottish Centre for Adverse Reactions to Drugs (CARDS). He was formerly Vice-President of the BPS and is a fellow of the Royal Colleges of Physicians in London and Edinburgh and of the Higher Education Academy. He is Clinical lead for the Prescribe project, a joint collaboration between the Department of Health, Medical Schools Council (MSC) and BPS to deliver a national eLearning solution to develop safe and effective prescribing amongst UK medical students. He is Medical Director of the Prescribing Skills Assessment, a joint initiative by the BPS and MSC to produce a national assessment of prescribing for all UK medical students. He is also part of an international group developing an electronic Summary of Product Characteristics (European Medicine's Agency) and a UK group tasked to develop unified prescribing documentation (Academy of Medical Royal Colleges).

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PROFESSOR HUGH BARR

Hugh Barr is President of the UK Centre for the Advancement of Interprofessional Education (CAIPE), Emeritus Editor for the Journal of Interprofessional Care, Emeritus Professor of Interprofessional Education and Honorary Fellow at the University of Westminster with visiting chairs at Curtin, Western Australia, Greenwich, Kingston with St George's London and Suffolk universities in the UK. He was awarded his PhD by the University of Greenwich based on his interprofessional publications and honorary doctorates by East Anglia and Southampton Universities for his role in promoting interprofessional education in nationally and internationally. His publications in that field include surveys, guidelines and systematic reviews. He served on the WHO study group on interprofessional education and collaborative practice. His background is in probation, prison aftercare, criminology and social work education.

PROFESSOR PHILIP A ROUTLEDGE

Phil Routledge graduated in medicine from Newcastle University in 1972. He trained in general medicine and clinical pharmacology in the North East of England, and in Vanderbilt and Duke Universities in the USA, before being appointed as a senior lecturer in Clinical Pharmacology in the Welsh National School of Medicine (now part of Cardiff University) in 1981, where he subsequently became Professor of Clinical Pharmacology in 1989.

He has served on several MHRA regulatory committees and on appraisal committees of NICE. In 2005, he was appointed first Chairman of the newly-formed UK Herbal Medicines Advisory Committee and a year later, Chairman of the All-Wales Medicines Strategy Group (AWMSG) which advises Welsh Government, particularly in relation to the introduction of new medicines and medicines policies in Wales.

Since 1981, Professor Routledge has been an honorary consultant general physician/ clinical pharmacologist/ toxicologist at University Hospital Llandough, in Cardiff. He and Dr Dai John first established the inter-professional learning programme for medical and pharmacy students in Cardiff University in 2011

He is currently President of the British Pharmacological Society (2012-13) and joint Chairman of the Prescribing Skills Assessment (PSA) Executive Committee. He was appointed Officer of the Order of the British Empire (OBE) in 2008 for services to medicine.

He is a keen birdwatcher and is also a lifelong supporter of Newcastle United Football Club.

DR DAI JOHN

Dai John is Reader in Pharmacy Practice and Education at the Cardiff School of Pharmacy and Pharmaceutical Sciences. He has been Deputy Head of School since January 2012. Dai was School curriculum review lead for the period 2005-2012. He graduated with First Class BPharm degree from Cardiff in 1985 and qualified as a pharmacist in 1986. He has a PhD, LLM and a Diploma in Social Science Research Methods. He was appointed as a Fellow of the Royal Pharmaceutical Society in 2009.

He, together with Phil Routledge, first established the inter-professional learning programme for medical and pharmacy students in Cardiff University in 2011; in relation to pharmacology, therapeutics and prescribing. His current research interests, and PhD supervision, are focussed on education and professional development. He is a member of a number of organisations, committees and working groups including the Welsh Pharmaceutical Committee and the Programme Board for Modernising Pharmacy Careers Wales, being co-Chair of work-stream 3 cross-cutting projects including workforce planning.

His interests include bird watching, real ales and fine (and not so fine) wines – although not all at the same time.

SESSION CHAIRS

PROFESSOR JOHN BLIGH

After training at St Andrews and Manchester John worked briefly in Bangor as a PRHO in General Medicine.

He was a general practitioner in Chester for 11 years before joining the University of Liverpool as, firstly, a senior lecturer then professor of medical education and head of the department of health care education. He was one of the foundation staff of the Peninsula Medical School in the far South West of England.

John was the inaugural President of the Academy of Medical Educators (2008-2010) and gave the William Pickles Lecture at the Royal College of General Practitioners in May this year.

He has published over 100 papers in leading international journals and most recently, is co-author of 'Medical Education for the Future: Identity, Power and Location' published in 2010 by Springer.

PROFESSOR G F BAXTER

Gary Baxter qualified in pharmacy at the University of Nottingham and The Royal London Hospital. After a period spent in pharmacy practice in hospitals in East Anglia, he undertook research training in experimental pharmacology, gaining a Ph.D. in cardiovascular pharmacology. Prior to appointment as Professor of Pharmacology at Cardiff University in 2007, Professor Baxter held research and academic appointments in London and overseas. He was previously British Heart Foundation intermediate research fellow at UCL, the University of South Alabama Medical College, USA, and the Ischaemic Heart Disease Research Unit in Cape Town, South Africa; Senior Lecturer in the Department of Medicine at UCL; and Reader in Cardiovascular Biology at the Royal Veterinary College, University of London. Professor Baxter has published extensively on the molecular pathophysiology of acute myocardial infarction and the pharmacological manipulation of autacoid mediators in myocardial ischaemia and reperfusion. The higher doctorate (D.Sc.) was conferred in 2009 by the University of Nottingham for published work on ischaemia/reperfusion injury and cardioprotection. He was appointed Head of the School of Pharmacy and Pharmaceutical Sciences in August 2010.

FOREWORD

The safety of patients is the most important consideration for all health care workers, at all times, in the NHS.

Prescribing medicines is, arguably, the most frequent health care intervention delivered by the NHS both in hospital and the wider community settings. Effective, safe prescribing takes into account an array of factors concerning the patient and the condition being treated and is rarely something that should be done in isolation.

Modern clinical care is delivered by teams of health workers each with specialist and, sometimes, special knowledge of the patient, and each has a responsibility to ensure that whatever treatment is being delivered to a patient it is safe and appropriate.

This conference is about team roles in prescribing and in ensuring patient safety. Our speakers will discuss contemporary issues relating to how medicines are handled in the NHS and how we can improve that most dangerous of clinical activities - writing and dispensing a prescription.

We hope you find the day stimulating and enjoyable and, most of all, that you will hear things that will cause you to reflect on your own practice and, maybe, change for the better.

Professor John Bligh, Dean Medical Education

Professor Gary Baxter, Head of School of Pharmacy and Pharmaceutical Sciences

Cardiff University

POSTER ABSTRACTS

"LEARNING FOR REAL – INTERPROFESSIONAL APPROACHES TO TEACHING PRESCRIBING"

1. Foundation Year Doctors Prescribing Competence Programme at Ysbyty Gwynedd.

Alwen J Nicholson and Catrin M Roberts
Betsi Cadwaladr University Health Board

INTRODUCTION

Prescribing is an essential skill practiced by qualified doctors from day one of their Foundation Year 1 (FY1) training [1]. Many graduates feel under-prepared to take on prescribing responsibilities following graduation [1]. The General Medical Council have acknowledged this and in Tomorrow's Doctors competencies have been identified [2].To ensure appropriate prescribing skills, BCUHB (West) has developed a competence framework, specific for FY1 doctors.

PURPOSE OF THE WORK The aim of the Prescribing Competency Programme (PCP) is to ensure that all FY1 doctors are competent at prescribing in practice and follow health board guidelines.

DESCRIPTION

The PCP involves workshops, e-learning and assessments to ultimately improve competence in prescribing. The programme is introduced at Undergraduate level with assessments at the end of the assistantship placement or during FY1 induction (for non-Cardiff graduates). Assessments include calculations, prescribing for in-patients and discharge, prescribing controlled drugs, anticoagulation and antibiotics. Whilst on placement at BCUHB (West), 5th year Cardiff University Medical Undergraduates attend prescribing workshops, gaining the experience required for the PCP.

DISCUSSION

In a recent study at BCUHB (West) all FY1 agreed that the PCP programme prepared them for their roles as prescribers, it "…made me feel confident and safe at prescribing especially when on-call"[3]. One consultant quoted "…the quality of the prescribing has improved just through looking on ward rounds, and there has been a reduction in adverse incidence since starting the programme"[3]. The PCP identifies further learning needs of newly qualified doctors and these are addressed as one-to-one tuition or during the monthly FY1 workshops led by pharmacists.

CONCLUSION

The PCP is a realistic tool, which demonstrates if newly qualified doctors can safely prescribe on appropriate charts and follow local guidelines. This will endorse the National Prescribing Assessments soon to be introduced.

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2. Pharmacy Undergraduate Views on a second IPE session with Medicine Students – has the novelty worn off?

Andy Jenkins[1], Sion A Coulman[1], Philip A Routledge[2] and Dai N John[1]
[1]School of Pharmacy and Pharmaceutical Sciences and [2]School of Medicine, Cardiff University

BACKGROUND

Interprofessional education (IPE) for medicine and pharmacy undergraduates on aspects of therapeutics and prescribing (for example, prescription writing, yellow card reporting, and medicine history-taking) was introduced in Cardiff in 2011/12. During the session three activities were used during which pharmacy and medicine students took turns to role-play the patient and prescriber. In November 2011 the cohort of 3rd year pharmacy students worked with 3rd year medicine undergraduates. In November 2012 the same cohort of pharmacy undergraduates (now as 4th years) worked as interprofessional pairs with a different cohort of 3rd year medicine undergraduates using three new cases.

OBJECTIVE

To obtain the views of final year pharmacy students on their experiences and views of a second IPE session.

METHODS

An anonymous, self-completion tool,[1] including a number of 5-point Likert-scale questions, was distributed to the pharmacy students at the end of the 2hr session. Ethics approval was obtained.

RESULTS

Evaluations were received from 60 pharmacy students who worked with a medicine student as an IPE pair. In total, 92% agreed/agreed strongly the session was useful (no disagreement) and 83% agreed/agreed strongly it was enjoyable (one disagreed). Only one student disagreed that 'there should be more IPE with medicine'. Almost all students (95%) agreed/agreed strongly they had learnt something from the approach of their medicine student partner. Approximately one-third (32%) agreed/agreed strongly they were well-prepared for the session in terms of therapeutics knowledge and 80% agreed/agreed strongly they were well-prepared in terms of medicines history-taking.

CONCLUSION

This was the second IPE session that this cohort of pharmacy students had experienced. The results indicate that the second IPE session was considered enjoyable and a useful way to learn from the approach of a medicine student, as was the first.[1] Further, the positive feedback on IPE in 2011[1] cannot be solely attributed to novelty of a one-off session.

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3. Interprofessional Therapeutics and Prescribing Sessions for Undergraduate Pharmacy and Medicine students at Cardiff University – What are the Academic Facilitators' Opinions?

Dai N John[1], Sion A Coulman[1], Pamela Bradley[1,2] , Efi Mantzourani[1] , Louise Hughes[1] , Rhian Deslandes[1], Leanne Roberts[1], Simon Wilkins[1,2,3], Jamie Hayes[2,3] , John Thompson[2] , James Coulson[2] and Philip A Routledge[2]

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BACKGROUND

A new interprofessional education (IPE) therapeutics and prescribing session involving case studies was developed and piloted (PAR and DNJ). Sessions involved year 3 medicine students working together with year 3 or year 4 pharmacy students. Students played the roles of prescriber and patient in medicines history-taking, adverse drug reaction reporting and prescription writing. Over 700 students and 12 faculty have participated in the years 2011-2012 and 2012-13, and six case studies have been used.

OBJECTIVE

To capture the views of faculty involved with facilitation of the IPE therapeutics and prescribing sessions.

METHODS

Facilitators provided feedback using forms that requested comments about what went well, suggestions for improvements, feedback on the cases themselves and for any other comments.

RESULTS

Feedback was provided by all 12 facilitators. Positive aspects included the cases themselves which were relevant to pharmacy and medicine students, the enthusiasm of the students, students recognising and appreciating each other's strengths and limitations and that the students reported that the session was interesting, useful and enjoyable. Areas to work on are all practical issues and include how we could better allocate students with partners, investigate other venues that would be both suitable and convenient for medicine and pharmacy students and the timetabling of the sessions. Overall, the academic facilitators enjoyed facilitating the sessions and all wish to continue to be involved. Another benefit of the sessions is the closer collaboration of some individuals from the different professions with regard to undergraduate learning, teaching and assessment, but also in other ways.

CONCLUSIONS

The academics involved strongly endorsed the value of these IPE therapeutics and prescribing sessions and support consideration of further development of IPE between undergraduate pharmacy and medicine students at Cardiff University. The collaborative development and delivery of the IPE sessions has strengthened established and created new links between colleagues from the professions at Cardiff.

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4. Interprofessional v Uniprofessional Therapeutics Learning - A Comparison of Third Year Medical Students working with other Medical Students or with Pharmacy Undergraduates

Dai N John[1], Sion A Coulman[1], Anesha Premji[1], John P Thompson[2], Helen Sweetland[2], Jamie Hayes[3] and Philip A Routledge[2]

[1]School of Pharmacy and Pharmaceutical Sciences and [2]School of Medicine, Cardiff University, and [3]Welsh Medicines Resource Centre

BACKGROUND

Interprofessional education (IPE) can develop an understanding of the roles and values of other health professionals

OBJECTIVE

To compare views of third year medical students who worked as uniprofessional or interprofessional pairs on a new education session on aspects of therapeutics and prescribing.

METHOD

Two-hour sessions were conducted with either medicine students alone or together with pharmacy undergraduates at Cardiff University. The sessions required students to work in pairs, role-playing health-professional or patient in medicines history-taking, adverse drug reaction identification/reporting and prescription writing. An anonymous, self-completion tool, including 5-point Likert-scale questions, was used for evaluation. The Mann-Whitney test was used to compare responses to the Likert-scale questions. Ethics approval was obtained.

RESULTS

In total 231 medical students completed the evaluation, 168 having worked with a pharmacy student. Students agreed/agreed strongly the session was useful (95%) and was enjoyable (93%). 88% said there should be more IPE between medicine and pharmacy, with only four disagreeing. Only 4% disagreed there should be more IPE between pharmacy and medicine undergraduates. Eighty-four percent of medics working with medics agreed/agreed strongly they were sufficiently well-prepared for medicines-history taking which was significantly higher ($p<0.001$) than medics working with pharmacy students (63%). Medics working with pharmacy students agreed significantly more strongly that they had learnt something by observing the approach of their partner ($p=0.001$).

CONCLUSIONS

This new therapeutics and prescribing session was deemed useful and enjoyable by medical students, whether or not they had worked with a pharmacy student. One possible explanation for the higher level of agreement by medics working uniprofessionally with their view on their prior preparedness for medicines history-taking is that they had not experienced pharmacy students' different approach to this skill during the session. If this explanation contributes at least in part to the differences between groups, then this supports the value of IPE in this format.

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5. Audit of Dental Foundation Training Year 1 (DF1) antimicrobial prescribing in general practice

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OBJECTIVES

To explore the appropriateness of antimicrobial prescribing by Dental Foundation Training Year 1 (DF1) dentists in general practice and assess whether current guidelines are being followed.

METHODS: During 2010-2012 DF1s throughout Wales took part in a Peer Review session (10 questions on clinical scenarios given to each DF1) and completed a questionnaire on prescribing decisions for a series of case studies. The first 10 prescriptions issued following the session were also collected on a standardised paper data collection sheet. All prescriptions were compared to the Scottish Dental Clinical Effectiveness Programme (SDCEP) guidelines for appropriateness (percentage correct) and prescribing practice was compared across the two data collection phases.

RESULTS

Throughout the period of the audit cycle appropriately indicated prescribing rates increased from 75% to 88% and appropriate choice of antibiotic increased from 78% to 91%. Improvements of around 20% were also seen in decisions regarding dose and duration; however baseline levels were lower (65% and 68% respectively). Rates of appropriate clinical treatment carried out alongside antimicrobial prescribing also increased from 75% to 88%. This suggests an increase in treatment interventions to address the cause rather than inappropriate prescribing of antibiotics.

CONCLUSIONS

Results suggest that the peer discussion and reference to the SDCEP guidelines helped inform DF1 prescribing patterns as practice improved post-session. However, their antimicrobial prescribing was still less than 100% appropriate. When and what to prescribe showed higher levels of accuracy but decisions on dosage and duration were less accurate. The flaws in current prescribing patterns highlight the need for continuing education in order to update and refresh knowledge. The value of interprofessional education to update and refresh such knowledge should be considered.

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6. 1,000 Lives Plus: Antimicrobial prescribing in general dental practice in Wales

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OBJECTIVES

General dental practitioners (GDPs) account for 10% of all antibiotics prescribed in the UK. However, not all prescribing is necessary or appropriate. As part of the 1,000 Lives Plus project, the purpose of the present study is to encourage the most effective clinical use of antimicrobials in general dental practice.

METHODS

A written invitation to participate in the study was sent to 723 GDPs registered with the Wales Deanery and located within four Health Boards. Participants were directed to consult the Scottish Dental Clinical Effectiveness Programme (SCDEP) guidance on prescribing. A total of 51 GDPs had recorded their prescribing activity online between August 2012 and January 2013. The following information was recorded on consecutive patients; diagnosis, reason(s) for prescribing, additional intervention(s) carried out and any other relevant information. In addition, the name of antimicrobial prescribed, along with the dosage, frequency and duration of therapy was recorded. Data were collected from 20 patients or for a period of 3 months, whichever was achieved first.

RESULTS

A total of 670 prescriptions were prescribed. Patients (94%) were aged 13 years or older. The most frequent diagnosis was acute apical abscess (25%), periocoronitis (15%) or periodontal abscess (11%). The most frequent reason given for prescribing was pain (36%) and/or localised swelling (23%). Additional interventions were provided in 28% of cases. "Patient demand" or "Patient declined local measures" was given as the reason for prescribing in a minority of cases, 6% and 3% respectively. The most frequently prescribed antimicrobial agent was amoxicillin (53%), metronidazole (35%) and erythromycin (4%). Amoxicillin was the most frequently prescribed antimicrobial for acute periapical abscess (29%) and metronidazole for periocoronitis (28%).

CONCLUSIONS

Two antimicrobials dominated prescribing choices; further analysis is needed into whether this was based on clinical appropriateness or other factors e.g. (familiarity/personal preference, or lack of clinical intervention). It would be interesting to evaluate the benefits or otherwise of interprofessional education between dental, medical, pharmacy and other healthcare professionals (nurse, etc) on antimicrobial prescribing.

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7. Teaching Prescribing Skills on Medical student placements

Helen Day and Owain Williams, Swansea College of Medicine

INTRODUCTION

Teaching our students prescribing skills has been an integral part of the Swansea College of Medicine curriculum in years one and two. From September 2012, the students entered their third year so the teaching needed to continue their development in this area and especially within the clinical environment, in order to produce safe and effective prescribers.

OBJECTIVES

Teaching materials were required which allowed students to build upon what had been taught within University-based teaching, to learn skills within the clinical environment and to prepare them for the task of prescribing as a foundation doctor.

DESCRIPTION

Evidence was gathered regarding the needs of foundation doctors[1] and the requirements of the GMC[2] and combined with other suggestions, such as those from professional bodies[3], the requirements of the prescribing skills assessment[4] and reports of high risk prescribing situations; to produce a list of requirements for the curriculum. This was allocated to teaching within placements, to self directed learning materials and to university-based teaching sessions. Materials were prepared to deliver this learning material.

WHAT WAS ACHIEVED

Teaching covers the areas identified and is well received by students and colleagues. Many sessions have been developed and delivered in partnership with clinicians, which has been valuable for demonstrating our complementary skills and ensuring that teaching is relevant for the students. The links with the teaching in year one and two have reflected the spiral curriculum which is in place at Swansea College of Medicine.

CONCLUSION

Pharmacists working within the College of Medicine can play a vital role in coordinating and developing a prescribing curriculum and implementing it both in the early years of a medical student's degree and later in the clinical setting.

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8. Development and Delivery of the First Pharmacist Prescriber Education Programme in New Zealand

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INTRODUCTION

In 2011, Health Workforce New Zealand (HWNZ) approved 'in principle' a proposal From the Pharmacy Council of New Zealand (PCNZ) for suitably accredited and experienced pharmacists who work in a collaborative healthcare team setting to have independent prescribing authority. HWNZ requested a 'demonstration project' of a suitable educational programme before making a positive recommendation to the Minister of Health to approve pharmacist prescribing.

OBJECTIVES

The aim of the project was to develop, deliver and evaluate a new university postgraduate certificate programme for training of pharmacist prescribers.

DESCRIPTION

The two New Zealand schools of pharmacy at Auckland and Otago collaborated to provide a joint educational programme, the Postgraduate Certificate in Pharmacist Prescribing. An entry requirement was prior completion of a postgraduate diploma in clinical pharmacy. The Certificate comprised two semester-long courses, 'Principles of Prescribing' and 'Prescribing Practicum'. Medical and nursing colleagues made substantial contributions to the teaching. During the Practicum, students worked under the supervision of a Designated Medical Practitioner (DMP) for 150 hours. Fourteen students undertook the programme in 2012; seven were based in secondary care and seven in primary care. During 2012, accreditation of the programme was granted by the Australian Pharmacy Council (APC), a first for Australia and New Zealand. An evaluation of the programme, including the perspectives of students and stakeholders, including DMPs, was undertaken.

DISCUSSION

There were several notable features including the requirements for prior completion of a postgraduate diploma and 150 hours of supervised prescribing practice, as well the collaboration between the two universities. During 2012, the programme was accredited and evaluated and the Minister of Health has announced drafting of the enabling legislation for pharmacist prescribers.

CONCLUSION

The first independent prescribing programme for pharmacists in New Zealand was successfully delivered in 2012.

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9. Medication Safety: Building your knowledge, protecting your patients

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Building on the success of the inter-professional safety seminars which are delivered to final year Medicine, Pharmacy and Nursing students across the North East of England, which address issues of medication and therapeutics safety. A pilot was carried out with second year medical students and third year pharmacy students. Four cases were developed with a number of tasks for the two professional groups to work together to solve. The sessions were facilitated by both medics and pharmacists. Each case has a brief scenario with appropriate test results and details of existing medication are provided. These sessions provided a unique opportunity for the two different professional groups to work together at an earlier stage in their training. The sessions were generally well evaluated by both the medical and pharmacy students, with the students valuing the opportunity to start to get an understanding of each other's roles within safe prescribing and therapeutics. The medical students expressed the view that they had begun to "understand the relationship between Doctors and Pharmacists and how they work together in prescribing drugs" and the pharmacists found that "effective communication is important between the doctor and pharmacists". The pharmacists also found it beneficial to "assess cases from start to finish rather than just from the pharmacist side". At present we are exploring the possibility of rolling this out again and embedding it within the curriculum. Some issues with the sessions need to be addressed before rolling this out, but these were mainly around suitability of the venue and ensuring enough BNFs are available for the students. The students were asked provide feedback about what they disliked in the sessions and one student stated "There wasn't anything to dislike. I think this type of learning should be encouraged more from pharmacists and medical students."

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10. What influences the prescribing of antibiotics in lower respiratory tract infection?

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INTRODUCTION

Antibiotics are widely prescribed for patients with lower respiratory tract infection (LRTI) yet only a minority have a pneumonia which responds to antibiotic treatment. Unwarranted prescribing of antibiotics is associated with several problems aside from the financial implications of unnecessary treatment: increased incidence of hospital-acquired infections, including MRSA and *Clostridium difficile* and the problem of antibiotic resistance.

AIM

To assess the influence of the history and examination findings on antibiotic prescribing for LRTI, and to explore the attitudes towards antibiotic prescribing through an understanding of the clinician and patient experience.

METHODOLOGY

A mixed methodology study of adult hospitalised patients, with an observational cohort for the quantitative arm and a phenomenological study for the qualitative arm of the research. Purposive samples of prescribers and patients were interviewed for the qualitative arm, whilst quantitative data was collected from admission records using a standardised data collection form.

RESULTS

Admissions data has been collected on 112 patients with ages ranging from 20 to 95. Preliminary quantitative data indicate that the diagnosis of LRTI and prescription of antibiotics is made on the recorded presence of a very small number of symptoms and signs, with 93% having shortness of breath, 78% having a respiratory rate >20/minute and 74% having purulent sputum. All patients had at least one X-ray. Interpretation of the films, prior to starting antibiotics, was by the admitting team. Laboratory investigations performed included blood culture in 20% to CRP in 39% of patients. 25% had a working diagnosis of pneumonia whilst 100% of patients received one or more antibiotics.

CONCLUSION

The results indicate that the diagnosis of LRTI is made using very few recorded criteria. Easy access to radiology and pathology in hospital can assist the diagnosis and should ensure appropriate prescribing of antibiotics. However, whilst 100% of patients received an X-ray, pathology was less utilised. There is the potential for interprofessional education to increase appropriate utilisation of pathology services to improve antibiotic prescribing in this group of patients.

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11. Pharmacist supported simulation exercises to develop confident Prescribers.

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INTRODUCTION

Medical undergraduates, as described in Tomorrows Doctors 2009, are required to demonstrate their competence as prescribers. An optional programme of six scenarios has been developed to provide this opportunity to final year medical students.

The exercises are designed to provide practical experience in areas cited as being the most common source of prescribing errors. The exercises provide an opportunity for the student to identify gaps in knowledge which can be addressed in future shadowing blocks.

OBJECTIVES

To provide a variety of prescribing scenarios in simulated setting to allow students to enhance their knowledge and confidence as Prescribers.

WHAT WAS DONE

Six prescribing scenarios were developed; insulin, anticoagulation, discharge medication, chronic pain, chest pain and medicines reconciliation. Each scenario was facilitated by a Pharmacist and included 3 activities. The Pharmacist provided individualised feedback at the end of each scenario. Students were asked to complete an online evaluation following the session.

WHAT WAS ACHIEVED

The timing of the programme was modified to allow students to attend prior to their final clinical placements. To date, forty five students have completed the programme, with 35 providing online feedback. Further dates have been arranged for spring and early summer 2013.

Student feedback has been positive and constructive. Participants describe an increased awareness of the prescribing resources available to them including the Pharmacist's role. Many students identified that this was the first time they had encountered some scenarios and therefore did not possess the basic knowledge to complete the exercises.

The Pharmacists involved reported a greater understanding of the knowledge of the medical students, with increased empathy when discussing errors.

CONCLUSIONS

This programme provides an opportunity for students to practice their skills before their shadowing placements. Resourcing the OSCE is challenging but there are longer term benefits of promoting team working between the Pharmacist and the newly qualified FY1.

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12. Developing an inter-professional teaching module for safe and practical prescribing

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INTRODUCTION TO THE TOPIC/IDENTIFICATION OF NEED

Health professionals including doctors, nurses and pharmacists are educated in their discipline by senior personnel in their respective fields. In contrast the practice of clinical medicine is multi-disciplinary. This is particular relevant in the choice, prescription, dispensation and delivery of drugs in clinical care.

At UCL Medical School, students have received therapeutics training from clinical pharmacologists and pharmacists for the past ten years. The strategic drive towards 'common learning' and inter-professional education nationally as part of the modernisation agenda (1), and the integration of the School of Pharmacy into UCL locally, presented an opportunity to review this training.

OBJECTIVES/PURPOSES OF THE WORK

To introduce the concept of multidisciplinary working through cross discipline learning for 4th year medical and pharmacy students.

DESCRIPTION OF WHAT WAS DONE

Lectures, 'therapeutics ward rounds' and case based learning techniques were used; sessions were delivered by a joint teaching team of a medic (clinical pharmacologist) and pharmacists, using materials prepared by the core team. Lectures and therapeutic ward rounds introduced concepts of developing a rational therapeutic approach, importance of drug history as part of the clinical history, use of independent evidence or that imbedded in national and local guidance to determine choice of drug and safe prescribing/medication errors. Case based sessions enabled students working in small groups to consolidate these principles through simulation of prescribing and drug administration tasks. These encompassed acute and chronic care, transition between care settings, adverse events, and high risk drugs such as anticoagulation.

DISCUSSION OF WHAT WAS ACHIEVED AND HOW THE WORK HAS ADVANCED UNDERSTANDING OF THE TOPIC

Feedback from the first semester indicated both student groups welcomed the early interaction with another health professional group; found simulation an effective way of learning; and gained insights of the different aspects each discipline brings to the clinical care of patients.

CONCLUSIONS/TAKE-HOME MESSAGES

Inter-professional teaching with a practical element can be a useful and important way of introducing multidisciplinary working at an early stage in the careers of health professionals.

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"MAKING IT COUNT - THE INTERPROFESSIONAL APPROACH TO NUMERACY SKILLS"

13. Interprofessional learning to promote numeracy skills for pharmacy and medical students

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BACKGROUND

Pharmacy and medical students in their first year participated in inter-professional numeracy workshops, comprising six student groups, with two pharmacy and four medical students in each group. Student groups worked together for two hours to answer a variety of numeracy questions, which ranged in type and level of difficulty.

OBJECTIVES

The purpose of this study was to determine and compare pharmacy and medical students' preparedness to participate in inter-professional workshops, their confidence and capability in conducting a variety of numeracy tasks, before and after participation in the workshop.

METHODS

An online questionnaire comprising the Readiness for Inter-professional Learning Scale (RIPLS), questions relating to students' confidence in a variety of numeracy tasks and ten numeracy questions was administered to each student before and after the workshop. The results for the pre-questionnaire are presented. Analysis of the post-questionnaire is underway. Independent t tests were used to compare means. Ethical approval was granted by the School of Pharmacy's ethics committee.

RESULTS

The response rates were 44.13% (n=64) and 43.9% (n=123) for pharmacy and medical students respectively. Students' readiness for inter-professional learning was high with each student group displaying positive attitudes towards inter-professional teamwork, without difference between student groups ($p > 0.05$).

Pharmacy students were more confident at expressing percentage concentrations ($p < 0.01$) and calculating the concentrations of mixed solutions ($p= 0.047$) than medical students. Medical students were more confident at calculating doses based on body weight ($p = 0.045$) than pharmacy students. 11.1% of pharmacy students and 21% of medical students completed all ten numeracy questions correctly.

CONCLUSIONS

Pharmacy and medical students are prepared to learn together in first year. Pharmacy students appear more confident than medical students in conducting a variety of numeracy tasks. However, this level of confidence was not reflected in students' ability to answer calculation questions correctly.

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14. Drug Calculation Teaching for Medical Students by Pharmacists

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INTRODUCTION

Drug calculation errors was a factor in the causes of prescribing errors by foundation trainee doctors.[1] Such errors in drug calculations can result in significant medication errors and subsequent increase in morbidity and mortality for patients[2]. Drug calculation is also a requirement of the prescribing skills assessment (PSA).[3] Formal teaching on drug calculations by pharmacists to medical students may reduce the risk of future prescribers making such drug calculation errors once they're qualified, and will aid the students in achieving the PSA qualification.

OBJECTIVES

To prepare a self-directed learning workbook on drug calculations for first year graduate-entry medicine students at Swansea College of Medicine, to be followed by a formative online drug calculation assessment.

WHAT WAS DONE

A self-directed learning package was produced for students to complete, to include various examples of real-life drug calculations. A formative online assessment was prepared for each student to complete, and the results were analysed. Any students identified as having problems with calculations were offered a tutorial.

WHAT WAS ACHIEVED

Every student in the first year cohort (n=74) completed the online calculation assessment, with 88% (n=64) of students achieving a mark of 16 out of 20 or greater. The average mark for the cohort was 18 out of 20 (90%). Any student achieving a mark of 15 or less, or any student that wanted further guidance/advice on drug calculations, were invited to a small group tutorial. Twenty students attended the tutorials, where more examples and guidance on difficult calculations were given.

CONCLUSION

Formal drug calculation teaching by pharmacists has improved medical students' understanding and awareness of the importance of drug calculations. Future teaching within the spiral curriculum at Swansea College of Medicine will re-visit drug calculations throughout the four-year course, in preparation for the PSA exam[3] and their future prescribing.

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15. A comparison of numeracy skills of first year students entering pharmacy and medicine at one UK higher education institution.

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BACKGROUND

Basic numeracy skills are essential to undergraduate students entering pharmacy and medicine degrees, as there are potential patient safety implications.

OBJECTIVE

To use a contextualised medicines-based numeracy tool to determine the inherent numeracy skills of students entering the pharmacy and medicine programmes at Cardiff University.

METHODS

Ethical approval was obtained. The tool,[1] consisting of twenty-five calculations to be completed in 45 minutes without a calculator, was administered in October 2011. The tool covered six principal numeracy domains, multiplication, division, percentages, fractions, ration and unit conversion. On completion candidates provided demographic data and information regarding their mathematical education.

RESULTS

165/168 pharmacy and 274/284 medicine students sat the diagnostic test in October 2011, producing a completion rate of 97%. Pharmacy students achieved a mean test score of 20.4 and medicine students a mean score of 21.3. Medical entry students performed better than pharmacy entry students (Mann-Whitney U; $p = 0.019$), with 17.8% of medical students achieving full marks compared to 8.5% of pharmacy students. Competence was lowest when answering a long multiplication question involving decimals, with 84/168 Pharmacy and 97/284 Medicine students failing to answer the question or answering incorrectly. Twenty-one Pharmacy (12.7%) and seventeen Medicine (6.0%) students scored 15 or less in the diagnostic test and were thus identified at an early stage as needing additional support in numeracy. This lead to targeted teaching in both pharmacy and medicine.

CONCLUSION

Although both the pharmacy and medicine faculty have been involved in the development, implementation and evaluation of this diagnostic assessment, to date the learning has been uniprofessional. However, now that the value of the assessment to both programmes has been established, it may appropriate to target resources more effectively. This may include conducting interprofessional sessions for students. There may be further opportunities for IPE in medicines-based calculations in later years of the programmes.

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"EXAMINING PRESCRIBING - INTERPROFESSIONAL APPROACHES TO ASSESSMENT"

16. Development of a regional prescribing assessment for doctors: Kent, Surrey and Sussex Deanery (KSSD) Pharmacy and South Thames Foundation School

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INTRODUCTION

In January and March 2011, regional surveys found that there were marked differences in both prescribing training and assessments used for Foundation doctors in trusts across the Kent, Surrey and Sussex region. A Doctors' Prescribing Assessment Group (DPAG), made up of medical and pharmacy representatives was formed and a regional prescribing assessment developed. Trusts use it to formatively evaluate the prescribing skills of their doctors.

OBJECTIVE, PURPOSE OF WORK

Identify weak prescribers and target their specific prescribing training needs locally at base.

DESCRIPTION OF WHAT WAS DONE

The prescribing assessment was undertaken by 422 doctors during their induction period in 10 Trusts across KSS and South London in July 2012; EQUIP study findings influenced some of the key medications chosen for assessment – e.g. analgesics, antibacterials, bronchodilators. Year 1 Foundation trainees were primarily targeted. Feedback from trainees and the coordinators was obtained.

DISCUSSION OF WHAT WAS ACHIEVED AND HOW THE WORK HAS ADVANCED UNDERSTANDING OF THE TOPIC

74% of trainees achieved a mean score of 19 out of 32 or higher but worryingly 38% made at least one error that was judged to have the potential to cause serious harm or death. Differences were noted in the performance of candidates when analysed according to Trust and medical school.

CONCLUSIONS/TAKE-HOME MESSAGES

The need for the KSS regional prescribing assessment will continue, even after the introduction of the national online Prescribing Skills Assessment (PSA). In addition to generic prescribing knowledge the regional assessment focuses on local drug charts, guidelines and can assess the trainees' ability to competently write up a drug chart or pre-admission medicines. If results in future years show that students who have completed the PSA consistently get almost full marks in the KSS assessment, and make no serious errors, the need for the regional assessment should be reviewed. The interprofessional approach between medicine and pharmacy contributed to the success of the initiative.

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17. Undergraduate Pharmacy and Medical formative OSCE: measuring the change in attitudes towards inter-professional learning

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OBJECTIVES: In an increasingly homogenous NHS, where Inter-professional education (IPE) is a recognised and regulatory requirement for both undergraduate and graduate medical students (UK), we set out to develop and deliver IPE effectively. IPE deployed as formative Objective Structured Clinical Examination (OSCE). Attitudes towards IPE were captured from both medical and pharmacy students.

METHODS: Following ethical approval, 85 Pharmacy and 187 final year medical students from UEA were timetabled to undertake joint therapeutics formative-OSCE. Working in pairs: one medical per pharmacy student (Pharmacy students completed the exercise twice) hey completed following stations:

Consultation skills: Medication history taking (actors)	Data interpretation	Assessment and management: (ATLS-dummy)
Simulation of emergency (SimMan)	Drug chart error spotting	Medication review and optimisation

Scenarios reflected real life situations and designed to utilise both professional skill sets for optimal patient care. Students were graded and given immediate verbal feedback on their performance and teamwork. Attitudinal changes of both professions were captured pre and post assessment via the "Readiness for Inter-professional Learning" (RIPLS) scale[1]. Categorical data was Chi-squared analysed to compare agreement with each statement before and after OSCE completion.

RESULTS: RIPLS explored attitudes towards the multi-faceted inter-professional working model as follows: effective team working, relationships, negative and positive professional identity, roles and responsibilities.

Significant increase in the level of positive agreement for all aspects of the scale ($P<0.05$, Chi-squared analysis) were portrayed Table-1 captures greatest attitudinal changes

Table 1 RIPLS statements demonstrating the greatest changes in attitudes

RIPLS statements	% agree n=234)		p
	Before	After	
Communication skills should be learnt with other healthcare students	58.6	80.8	<0.001
Shared learning will help me think positively about other healthcare professionals	71.5	88.9	<0.001
I would welcome the opportunity to work with other healthcare professionals on small group projects	73.7	86.2	<0.001
Shared learning will help me understand my professional limitations	81.1	91.1	<0.001

CONCLUSION: While joint formative OSCEs are resource intensive, a strong positive effect on attitudes towards inter-professional learning is demonstrated, which may well improve prospective IP working. Further research would look to develop effective controls: allowing us delineate the degree of change due to OSCE over the Hawthorne effect[2] Gaining a deeper understanding will aid both development of delivery and capturing subsequent benefit.

During the assessments, student engagement, enthusiasm and desire to learn from both the OSCE's and each other were encouragingly high. In the words of Sir Winston Churchill: "Attitude is a little thing that makes a big difference". Our findings support the potential of IPE to change attitudes toward effective team working within therapeutics in pharmacy and medical students.

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"JOINED UP CARE - INTERPROFESSIONAL APPROACHES TO IMPROVING PATIENT CARE"

18. Exploring Quality in Stroke Care – An Inter-professional Approach

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INTRODUCTION: Over 11,000 people experience a stroke or TIA (n=7500 as a first event) in Wales each year (1, 2). This patient population relies on effective multi-disciplinary teams to provide patient-centred care services. (3, 4, 5, 6). Stroke care was thus identified as an appropriate subject area to bring together healthcare students from across Cardiff in an inter-professional forum (7).

PURPOSE : Final year students in Medicine, Nursing, Speech and Language Therapy, Occupational Therapy, Physiotherapy, Dietetics, Podiatry, Biomedical Science and Social work attended a half-day inter-professional seminar.

The aim was to explore the journey of a stroke survivor, with several learning objectives mapped directly to the programme, including: aetiology; multi-disciplinary working; and organisations working to improve stroke services. Participants listened to a survivor's story and explored their own experiences in break-out groups. Their stories and experiences were mapped and, using nominal group methods and large group discussion methods, improvement opportunities were explored. In addition, the break-out groups were recorded and simple thematic analysis was undertaken.

DISCUSSION: Four key themes emerged from the event:

- The survivor's reality of recovery once discharged from inpatient care
- The potential for improved management of care by the multi-disciplinary team
- The participants' and survivor's desire to develop themes further and work together to improve quality of stroke services
- The value and importance of inter-professional learning to healthcare undergraduates and the commitment for further IPE learning events.

CONCLUSION: Inter-professional education provides a unique opportunity for participants to learn with and from each other. The inclusion of the survivor's voice provides a powerful learning experience. Working together offers opportunity to share and develop experiences and to explore quality improvement actions.

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19. Collaborative practice: Medical and nursing students working and learning together to immediately improve patient care at the bedside in Wales, UK

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Medical and Nursing Students at Cardiff University

Patient-centred care lies at the heart of quality improvement efforts. The Institute for Healthcare Improvement Open School provides health care professional students with the knowledge and skills to lead change in health care delivery. The “Ask One Question” campaign started by its member’s challenges students, regardless of their professional role, to ask every patient they meet in hospital, “What can I do to improve your stay?” Students are encouraged to professionally act upon each response to improve the patient experience.

Medical students and nursing students at Cardiff University asked the question to their patients and analysed the responses. Together they identified interdisciplinary learning opportunities and areas of potential improvement for a patient’s hospital stay.

160 patients were asked the question. For both professions, over a third of the responses referred to fundamentals of care, for example: requests for more water, a pillow or a blanket. These comfort responses were tasks that students could assist patients with at the bedside regardless of their professional role.

Through an interdisciplinary focus group, professional relationships with patients were explored. From a nursing perspective, increased patient contact time facilitated seamless integration of the question into daily practice. Medical students felt they could assume an active rather than passive role at the bedside and demonstrate to patients that they cared about their experience.

Asking a simple question to a patient can identify opportunities to improve their experience of care at the bedside. The ‘Ask One Question’ campaign promotes an activity that can bring nursing and medical students to learn together. Fundamentals of care are the responsibility of the whole multidisciplinary team. Interdisciplinary projects like this must be included in curricula to foster learning with, from and about each other’s professional roles to promote high quality patient care.

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20. 'Hard to Swallow'

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INTRODUCTION

It is recognised that prescribing for adults with swallowing difficulties is not always appropriate or cost-effective; the pharmacy and speech and language (SLT) departments in Cwm Taf (CT) have worked closely together to develop initiatives aimed at addressing this issue.

OBJECTIVES

The objectives were twofold: develop a multidisciplinary approach to the provision of care for adult patients with swallowing difficulties by introducing a scheme allowing limited secondary care prescribing by SLT staff and produce a local procedure for use by all staff involved in their care, with the intention that these will lead to clinically appropriate and cost-effective treatment for patients in CT.

DESCRIPTION

To support prescribing by SLT staff, pharmacy provided training on prescribing. Guidance was developed jointly by SLT and pharmacy and SLT staff completed the 'Prescribing and Administration of Medicines' e-learning package. Competency was assessed individually leading to implementation of the scheme which allows prescribing from a limited list of items; the scheme is unique in Wales. In addition, a local procedure for prescribing for adults with swallowing difficulties was developed jointly for use by prescribers, pharmacists and nursing staff across CT with implementation supported by training for relevant staff.

RESULTS/DISCUSSION

Following training, 9 SLT staff (75%) are now prescribing within secondary care and an audit is planned to evaluate the impact of the scheme.

The procedure has also been implemented; 80 pharmacy and SLT staff have been trained with more sessions planned for ward nursing staff, GPs and community pharmacists, including the use of multimedia tools.

CONCLUSION

The successful joint working has resulted in prescribing by SLT staff as well as a comprehensive local multidisciplinary procedure. These developments will improve patient safety, reduce inappropriate prescribing and support the cost saving initiative aiming to save £89,000 pa on costly unlicensed 'special' medicines in primary care.

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21. Health literacy: informing the nation in a bid to improve patient safety in prescribing

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Poor health literacy has been linked to poorer health and higher mortality, and the Department of Health now recognises the link between poor health literacy and growing health inequalities in the UK. Recent research has shown that 43% of adults aged 16 to 65 are unable to understand everyday health information. The MHRA plans to release a series of versions of Drug Safety Update articles aimed at patients and the public, the first of which outlined new contraindications and dose limitations for simvastatin. The aim of such articles is to communicate important safety information to patients in an easy to understand format. We analysed the MHRA leaflet using The Gunning Fog Index, a readability test designed to estimate how easily a piece of text could be understood by the intended audience. A score of below 8 suggests that a piece of text could be understood by a near universal audience. The MHRA leaflet produced a score of 13.29 which we believe confirms that it would be too complex for many patients to understand. We have produced a version of the leaflet with a Gunning Fog Index if 4.8 which we believe would be more appropriate for a wider audience. We also question whether it is appropriate, or even safe, for the use of emails, letters and leaflets to become more widespread without a serious drive to make this information more accessible to the population at large. The MHRA should work with appropriate health professions interprofessionally to help address these concerns and assist in improving health literacy in relation to prescribing.

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22. Medicines management in care home residents: impact of a pharmacist clinical medication review

Kylie Hughes,
Cwm Taf Health Board

INTRODUCTION: The Department of Health's Care Home Alert was issued in January 2010 following the publication of the Care Homes Use of Medicines (CHUMS) report in November 2009[1,2]. The cost-effectiveness and logistics of a pharmacist-led clinical medication review (CMR) service to care homes within Cwm Taf needed to be researched to identify if investing in this service would be financially rewarding and minimise unnecessary and potentially harmful medicines prescribed.

METHODS: One home was selected using convenience sampling. Prospective CMRs of all forty patients within the care home took place between April-July 2011. Residents were registered with five GP practices.

RESULTS: The 40 residents were prescribed a total of 326 medicines (mean: 8/patient). A total of 147 interventions were identified (mean: 3.68/patient). Of all prescribed medicines, 45% (147/326) required an intervention. Table 1 provides a summary of the interventions identified and accepted. A combined 71.4% (25/35) of 'stop' interventions were for 'inappropriate duration' or 'indication no longer being valid'. Two-thirds (67%) of interventions were accepted by GPs and implemented. The cost reduction of the repeat medication following one CMR per patient for the care home was £14,576 (mean: £365/patient or £100/intervention) per annum. The gross pharmacist cost per CMR was £24.33. A net saving to Cwm Taf Health Board of £13,602.80 per annum was achieved, equating to a 14-fold return on investment in medicines expenditure.

Table 1. Types of interventions recommended and acceptance level

Intervention type	Number of interventions recommended as a percentage of the total number of interventions identified (n=147)	Number of interventions accepted and implemented by GPs (% of intervention type)
Stop (n=35)	23.8%	24 (68.6%)
Technical (n=30)	20.4%	30 (100%)
Start (n=27)	18.4%	8 (29.6)
Alter (n=23)	15.6%	14 (60.9%)
Monitoring advice (n=18)	12.2%	15 (83.3%)
Switch (n=14)	9.5%	8 (57.1%)

DISCUSSION AND CONCLUSION: The number and range in the nature of interventions recommended and subsequently accepted and implemented highlights the need for regular reviews in this patient population. Including only one care home and no control arm limits the generalisability of the results. Considerable cost savings in medicines expenditure were achieved by using a clinical pharmacist to improve cost effectiveness and safety of prescribing in care homes through performing CMRs. The opportunities for interprofessional working between pharmacy, medicine and care home staff to improve cost effectiveness and patient safety should be considered.

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"ERRORS - RECOGNISING AND REDUCING - AUDIT AND GUIDELINES"

23. The Prescription Challenge: A Simple Improvement Method for Testing Local Pharmacy Guidelines.

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OBJECTIVES

The ease of use of local pharmacy guidelines for clinicians is often difficult to assess. This project aimed to create a simple method to identify areas for guideline improvement from the clinicians who use them.

METHODS

In the clinical setting, doctors from every grade across medical and surgical specialties were given a ten-minute, paper-based clinical scenario. The challenge was to accurately prescribe intravenous aminophylline for a life-threatening asthmatic. This 'Prescription Challenge' was used to assess the Oxford University Hospitals (OUH) pharmacy guideline. The addition of pre and post challenge questionnaires helped gather background information and qualitative data from the clinicians doing the challenge.

RESULTS

Compared to the BNF, prescriptions using the local guideline were more accurate with an average of 1.56 vs. 6.38 errors/prescription. Interestingly, the best prescribers were the Core Trainees (and Specialist Trainees1/2) compared to Foundation doctors and Specialist Registrars (1.4 vs. 2.8 vs. 7 errors/prescription respectively.) The most common errors include incorrect fluid volumes, incorrect doses and omitting maintenance doses. These results plus comments gathered for guideline improvement were fed back to Pharmacy for consideration and guideline modification.

CONCLUSIONS

The Aminophylline pharmacy guideline appears to be better than the BNF for clinicians producing accurate prescriptions. However, there is still room for reducing errors. This simple method has effectively highlighted key areas for guideline improvement that is directly fed back to pharmacy. The Prescription Challenge is currently being extended to assess high-risk medications used in emergencies, where clarity of information is essential.

It is expected that pharmacy and medicine professionals working more closely together would reduce the errors associated with aminophylline dosing but further work would be needed.

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24. A weeks perspective into the most prevalent prescribing errors in MAU and SAU

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OBJECTIVES

This study assessed the drugs used in MAU and SAU over 6/10 day period, and how many dose-specific prescribing errors were evident. It also assessed the documentation of the "as required" drugs, and the omitted drugs.

METHODS

Two 3rd year medical students collected data from 101 patients in total from MAU over 6 days, and SAU over 10 days. Our inclusion criteria were patients who had been admitted over 12 hours previously on MAU and SAU. We used information which was readily available to the whole healthcare team, in order that we used the same sources of information for each patient.

RESULTS

Out of the 608 drugs prescribed on MAU and SAU over 6/10 days, 24% of the doses were either missing or illegible. In 17% of "as required" medication the indications were missing. 10% of the GP notes were unavailable, and 34% of the notes were blank. Of those prescriptions 58% of patients stated that they were on medication.

CONCLUSIONS

We found significant problems in the documentation of GP prescribed medications, and legibility of data. This illustrates the real danger in patients going to hospital and not being given their necessary repeat prescription or the wrong dose of hospital administered medication. This lack of information necessitates pharmacists calling GP surgeries to get a list of pre-admission medications, which is inefficient and would be unnecessary if there was a national database of medications of every patient. In addition emphasising the need for writing in clear English from the highest grade downwards would reduce the amount of prescription errors. Interprofessional education and collaboration between pharmacy and medicine may be an appropriate next step.

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25. Prescribing Accuracy within the Orthopaedic Directorate at Morriston Hospital.

Laura Marie Harper
Morriston Hospital.

BACKGROUND

In 2007 a safety incident report collated by the National Patient Safety Agency (NPSA) deduced that 32% of serious incidents occurred as a result of prescribing. (1) The study aim is to establish the quality of prescribing in the Orthopaedic Directorate at Morriston Hospital.

OBJECTIVES

To identify the number of legally invalid prescriptions (Rx)

To determine the number of illegible Rx.

STANDARDS:

100% of Rx must be signed and dated by a prescriber, with contact details.

100% of non-medical prescribers should document IP /SP alongside each Rx.

100% of Rx are written legibly using the approved drug name, in block letters.

100% of Rx have a single route of drug administration specified.

METHOD

Data collection was carried out over 5 days for each ward within the Orthopaedic Directorate. Every inpatient prescribed a regular or PRN medicine was included. A standard form was used in data collection; focusing on legality, legibility, documentation, abbreviations, brands and administration. Ethics approval was not required for the undertaking of clinical audit.

RESULTS

93% of Rx are legally valid (n=1727/1853) specifying a date of prescribing (n=1732/1853); 40% of Rx specified contact details (n=698/1727).

Of the known nurse-independent prescriber (NIP) Rx, 100% had documented IP.

Block letters are used in Rx writing 42% of the time (n=772/1853).

Abbreviated Rx: 4% (n=76/1853), Branded Rx: 21% (n=355/1663).

A single route of administration was documented for 89% of Rx (n=1613/1818).

DISCUSSION / CONCLUSION

Hand-written prescriptions are often illegible or missing information, increasing the likelihood of adverse events and potential harm to patients. (2) The importance of proper prescribing can be re-enforced by signposting prescribers to the All Wales Medication Chart e-Learning package that is available on the Health Board intranet within Morriston Hospital. Increased awareness of the package and the sharing of its value between professions should provide more opportunities for error reduction in prescribing.

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26. An audit of the level of adherence to the All Wales Prescription Writing Standards at the University Hospital Wales

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BACKGROUND

Adverse drug events are common, and contribute significantly to patient morbidity, mortality, and health care costs. Whilst some may be unavoidable, those caused by errors in the prescription writing process are largely preventable. Standardisation of medication charts and prescription writing processes reduces the incidence of prescription writing errors. In light of this, Wales introduced the All Wales Medication Chart (AWMC) and the All Wales Prescription Writing Standards (AWPWS) in 2004.

METHODS

A cross-sectional evaluation of adherence to the AWPWS was performed in a single, large, tertiary referral centre in Wales. A specific- for-purpose audit tool was developed and utilised for data collection.

RESULTS

0 out of 271 medication charts reviewed completely adhered to the AWPWS. Frequently absent or incorrect information included prescriber details (62.1%), block capitals for drug names (70.4%), and aspects concerning drug dose (60.3%). 1.1% of medication discontinuations were transcribed correctly. The multiple charts box (90.2%) and allergy box (80.1%) were more often completed appropriately.

CONCLUSIONS

Adherence to the AWPWS was poor. Important domains, such as allergy box (19.9% incomplete/missing information) and drug dose legibility (11.4% illegible) had unacceptably high rates of failure given their potential for disastrous consequences when incorrect. Following implementation of much needed remedial measures, the current audit should be repeated as to complete the audit-cycle and ensure adherence to the AWPWS has, and continues, to improve. Interprofessional education for pharmacy and medicine staff should be considered as one option to produce further improvement but this would need evaluating.

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27. Do GPs value the input made by pharmacists in the discharge process? A local service evaluation

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BACKGROUND

Pharmacists have a key role in the detection of medication errors at discharge[1]. Pressure to produce timely discharge information has resulted in final accuracy checking by pharmacists at one Essex hospital to be regularly bypassed. A recent audit found that 41.9% of Electronic Discharge Summaries (EDS) were released unchecked by a pharmacist, of which 47% had errors[2]. This study aimed to determine the extent to which GPs value pharmacists at discharge and their perceived importance of accuracy and timeliness of EDS.

METHOD

A piloted survey was sent to all NHS-registered GPs in North East Essex, alongside separate participation cards to allow anonymous responses. Within the survey, GPs were asked to indicate their preferences for pharmacist involvement in the discharge process and to rate the importance of components and characteristics of the local EDS.

RESULTS

42 (27.4%) GPs completed surveys, who were 54.8% male with a mean (SD) career spanning 17.9 (9.1) years. All GPs ideally wanted EDS within 24hours of discharge. One GP reported being "*unaware that pharmacists even check summaries*", and another "*assumed all communications received are accurate*". 10 (23.8%) GPs 'never' look if EDS has been checked for accuracy, but 29 (70.7%) would be unhappy to update their records knowing EDS had not been checked. 24 (58.5%) GPs were willing to wait >24hours to ensure EDS was checked for accuracy. EDS characteristics were most frequently ranked in order of importance as follows: 1.Accuracy, 2.Timeliness, 3.Completeness, 4.Spelling and grammar.

DISCUSSION

Interestingly whilst GPs wanted EDS to be released within 24hours they were frequently willing to wait longer to enable pharmacy to improve the level of accuracy. Despite its perceived importance, some GPs lacked awareness of pharmacy's role in improving accuracy. Improvements to multi-disciplinary understanding at discharge could increase vigilance in primary care, preventing inaccuracies on EDS being transferred to patient records. Interprofessional education for GPs and pharmacists may assist in improving accuracy.

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28. A pilot study of prescription Interventions within community pharmacies in Wales

Rachel Roberts
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INTRODUCTION

Pharmacy prescription interventions help ensure the safe and appropriate use of medicines. Within community pharmacy many interventions go unreported so their extent and nature is unknown. Analysis of interventions can be used to inform and support prescriber training and information requirements, thereby reducing the number of errors and improving patient safety.

In order to measure intervention trends over time and between settings, it is essential that comparable intervention audit forms are used.

METHOD

In January 2012 a pilot audit of prescription interventions was undertaken to develop a practicable and unambiguous audit form to collect baseline data on activity and workload associated with community pharmacy prescription interventions for potential wider roll-out.

Twelve South Wales community pharmacies documented all prescription interventions over a two week period. The audit form recorded: type and outcome of intervention; time spent in resolution; seriousness of the intervention (in terms of potential clinical harm). Data from two pharmacies were excluded due to incomplete forms.

RESULTS

Data analysis and feedback from pilot participants has led to modifications to the audit form and accompanying information. Analysis of the pilot data has been disseminated to various stakeholders across Wales. This has been positively received and has resulted in support for wider roll-out.

In February 2013 the community pharmacy prescription intervention audit was rolled out amongst all pharmacists in the Neath Port Talbot locality. Analysis of this larger data set will provide insightful evidence about the nature and extent of prescription interventions.

DISCUSSION

The success of this pilot and support for its wider roll-out demonstrates that pharmacists and other healthcare professionals are ideally positioned to identify, develop and lead on initiatives to improve patient safety. The 'tools' that are needed are often readily available (i.e. audits). Thought should be given to how these can be developed and used to provide evidence to improve safety.

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"DELIVERING THE GOODS - INTERPROFESSIONAL APPROACHES TO TEACHING AND LEARNING METHODS"

29. Development and Evaluation of a new MPharm unit for Pharmacy Front-line Clinical Skills

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INTRODUCTION

The introduction of the General Pharmaceutical Council's new accreditation criteria for MPharm degrees in 2010 means many schools are reviewing their programmes to increase clinical skills, in line with those increasingly required by pharmacists. In addition, the GPC requires increased engagement with other healthcare professions.

OBJECTIVES

For an interprofessional teaching team to develop and evaluate a new interactive "Pharmacy Front-line Skills" unit for final year MPharm students.

DESCRIPTION

Year 4 MPharm students were taught injection techniques, cardio-pulmonary resuscitation, how to use an automated defibrillator and how to respond in several emergency situations e.g. adrenalin autopen injection. These three 2-hour workshops were taught in relatively small groups (approximately 16 students), were participatory and highly interactive. Evaluation forms were completed at the end of each session.

DISCUSSION

Feedback was very positive – the students learned new skills and enjoyed 'learning by doing'. They particularly enjoyed the 'hands-on' approach and the realistic nature of the scenarios, seeing the relevance of the teaching to practice. Students felt they benefitted from being able to practise skills repeatedly and learn at their own pace:

"Being able to actually measure out and inject [by] ourselves (via manikin) was useful. I feel I learn a lot more by actually doing things ourselves rather than someone explain it to us."

Students commented that the course "*encouraged team working*" and felt it had been useful and enjoyable to learn in small groups. Some students wanted more time spent on these skills or felt such skills should start earlier in the course and be kept up to date.

CONCLUSIONS

Combining the expertise, context and experience of members of an interprofessional team has led to a well-received clinical skills course. Although students were not assessed they did state that they felt better prepared to deal with a number of medical emergencies and more confident to undertake future clinical skills training.

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30. Students' Views on Interprofessional Learning Workshops Using a Qualitative Method

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INTRODUCTION

Over the last ten years, there has been an increasing emphasis on providing interprofessional learning (IPL) opportunities for health and social care students in higher education. The Schools of Pharmacy and Medicine at University College Cork (UCC) in collaboration with the Mercy University Hospital run safe prescribing workshops for students. Students are divided into groups and are asked to carry out a drug history for an inpatient using one of three sources. Groups work together to prioritise a pharmaceutical care plan for the patient. The objective of this study was to determine the views and attitudes of pharmacy students taking part in these workshops.

METHOD

Pharmacy students who took part in workshops (*n*=43) were emailed in January 2013 with a brief description of the study and an invitation to take part in a focus group. Twenty students were subsequently interviewed in four focus groups consisting of four to six participants. Focus groups were transcribed, verified and analysed thematically using a constant comparison method.

RESULTS

Three major themes emerged from the focus groups (invaluable learning experience, barriers to IPL and going forward with IPL). An overwhelming majority of students found the workshops useful for enhancing both their own and their peers' professional identity. Students felt that time and preconceived attitudes to be the major barriers to IPL. Participants were in general agreement that IPL should not finish on completion of their degree but that there was a role for it in their future. Indeed many of those interviewed discussed how it could contribute to continued professional development.

DISCUSSION

Further work planned includes extending the group interviews to medical students and comparing their views to those of pharmacy students. It is hoped results from this study can be used to further advance the place of IPL activities in both the pharmacy and medicine degrees at UCC.

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31. The design of an inter-professional, student-centred approach to the teaching and learning of medication-related consultations

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OBJECTIVES

This paper describes the design of an inter-professional consultation skills teaching programme delivered within a non-medical prescribing programme.

BACKGROUND

Pharmacists and nurses enrolled on the Cardiff University non-medical prescribing course took part in a series of workshops specifically aimed at improving medication history-taking and providing patients with information about newly prescribed medicines.

DESCRIPTION / DESIGN OF TEACHING SESSIONS

Teaching was delivered in two stages with 4 weeks in-between, starting with a lecture on the theoretical models of consulting and a practical workshop to practise information gathering skills. Actor patients were recruited to role play a clinical medication review, based on their own experiences. Students worked in pairs to retrieve information from patients using the medication-related consultation framework (MRCF) as a guide. Each student was given the opportunity to role play a consultation followed by a debriefing session with the 'patient' and facilitator. Students practised these skills over the following weeks in their scope of practice and after two weeks asked to provide feedback on aspects of the consultation that were going well, areas for improvement and examples of challenging situations. Practitioners were also asked to identify one medicine that they would be prescribing in the future. This information was used in preparation for the next workshop to brief actor patients as to the type of medications to expect and responses to provide and prepare scenarios of challenging situations. These were role-played with a focus on providing information about newly prescribed medication. Students reflected on their performance with feedback from their peers and facilitators from Pharmacy, Nursing and Medical disciplines.

DISCUSSION

Student evaluation of these workshops showed support for inter-professional education (IPE), with benefits for patient communication and improved understanding of roles and perspectives. The design lends itself to an inter-professional setting since it is practitioner-centred and can be adapted to a range of therapeutic areas.

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32. An inter-professional approach to the teaching and assessment of consultation skills for non-medical prescribers.

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OBJECTIVES

This study aimed to evaluate an inter-professional approach to teaching consultation skills to pharmacists and nurses enrolled on a non-medical prescribing programme.

METHODS

Students were taught about the different theoretical approaches to consulting prior to submitting a reflective assignment on the application of theory to their scope of practice. A content analysis was undertaken to identify the different consultation models adopted for the wide range of therapeutic areas covered in this inter-professional postgraduate programme.

RESULTS

Analysis of a total of 46 student essays for the 2008/9 (n=22) and 2009/10 (n=24) cohorts revealed that nine different consultation models were being used by students as a basis for reflection. Most frequently cited was the Calgary-Cambridge guide, followed by Neighbour and Pendleton frameworks which were applied across fourteen different therapeutic areas in primary (i.e. general practice, anticoagulation, rheumatology, respiratory, gastroenterology, emergency out of hours and cardiology clinics) and secondary (i.e. acute admissions, anaesthesia, intensive care, haematology, orthopaedics, oncology and out-patient) care settings. The medication-related consultation framework (MRCF) was one of the main models adopted for patients seen in anticoagulation and rheumatology clinics. Other models used were the SEGUE, Byrne and Long, Balint, Fallowfield and Parson's consultation frameworks.

CONCLUSIONS

This content analysis confirms that the underpinning theory used in the teaching and learning of practitioners on the non-medical prescribing course was fit for purpose across a wide range of therapeutic areas. The utility of these three key models is not surprising as they are not confined to certain therapeutics areas as is the case with Fallowfield's 'DREAM' model, which was specifically designed for oncology settings. The work also demonstrates that the shared learning outcomes set were realistic within an educational and practice context. It is evident that these concepts were not only being learnt but also applied to practice to develop future prescribers' consultation skills.

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33. Building connections – Interprofessional Education using Problem Based Learning - perceptions of medical and pharmacy students and their teachers

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OBJECTIVES

To introduce and develop interprofessional education (IPE) for second year undergraduate medical and pharmacy students, using problem based learning (PBL).

To evaluate students' perceptions of the learning using a qualitative approach.

METHOD

Equal numbers of students from each discipline were given shared learning objectives, case studies, and questions in advance.

Students then attended small group sessions (ten students per group).

Medical and pharmacy students were paired, introduced each other, and then worked on the cases in pairs.

The whole group reconvened to discuss, reflect and learn from the cases.

The case studies, written by students, were about patients in the community. Questions were added by the authors, to encourage students to consider patients holistically, including clinical, pharmaceutical, and social aspects.

RESULTS

Student feedback was collected, and in every instance was positive:

Almost all students were apprehensive beforehand, but all greatly enjoyed the sessions.

All wanted to be involved in more, and similar, learning in future.

Student comments included:

"We are all trying to help the patient, it would be most effective if we work together."

"Patient care is a holistic approach, both professions contribute."

"This could work in a series of sessions, pharmacists can teach medics and vice versa, using case studies to work through body systems and relevant drugs is helpful."

CONCLUSIONS

All students found these sessions rewarding and enjoyable, highlighting particularly improved knowledge and understanding of other professions' roles, and their belief that IPE would improve patient care.

Both students and educators would recommend similar learning.

RECOMMENDATIONS AND FUTURE PLANS

We have confirmed further sessions for March 2013.

We think our method is practical and realistic, noting timetabling and logistical constraints:

The cases could be re-used and developed; learning could take place in different settings; student numbers could be flexible; only minimal equipment is needed.

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34. Building connections - Interprofessional Education

Mrs Suzanne Cutler[1], Kari Robert[2], Gaynor Bresnen[1] and Julia Riley[2]
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INTRODUCTION

Successful patient care relies on effective working relationships between health and social care professionals; however, evidence suggests that these professionals do not collaborate well together. In recent years there has been increasing emphasis on the integration of interprofessional education (IPE) in undergraduate education of pharmacy[1] and medical students.[2] Regulators require educators to embed interprofessional education throughout curricula. Educators are faced with challenges in the development, delivery and assessment of such learning,[3] particularly if such learning is face-to-face.

PURPOSE OF THE WORK

To introduce face-to-face IPE for undergraduate pharmacy and medical students, and to assess the practicalities and sustainability of face-to-face IPE.

WHAT WAS DONE

An interprofessional team of educators (medics, pharmacists and social worker) identified aspects of the curriculum that would enhance the learning of both pharmacy and medical students. Two separate interprofessional activities were developed for 2nd year and final year undergraduate pharmacy and medical students using a similar format.

DISCUSSION

Successful IPE can be achieved face-to-face. The identification of appropriate IPE activities is vital to ensure student learning is maximised. Resources for such sessions can also be developed by students from other aspects of the course, minimising staff time in developing the sessions. Furthermore, educators found the joint development and implementation of such session both rewarding and beneficial and reflected a working practice that we were trying to teach undergraduates students. IPE provided a constructive environment where educators from a range of professions could share useful ideas and reflect on future IPE initiatives.

TAKE HOME MESSAGE

Successful face-to-face IPE can be achieved. The interprofessional working on the development and implementation of IPE was also beneficial to staff involved. Future initiatives could include developing such sessions to include other health and social care professionals.

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35. Interprofessional and cross-institutional collaboration: developing an undergraduate prescribing skills iBook®

Layla Fattah[1], Matt Ramirez[2] and Kurt Wilson[3],
[1]CPPE.ac.uk, [2]MIMAS.ac.uk and [3]Manchester Medical School on behalf of the prescribing skills iBook team

INTRODUCTION

With the forthcoming introduction of the national prescribing skills assessment for all final-year medical students, Manchester medical school (MMS) identified a need for prescribing teaching, relevant and accessible to all students. As MMS has supplied all clinical year undergraduates with iPads® to enhance their learning, an iBook® was developed to provide an interactive, universally accessible means of delivery.

OBJECTIVES

To create an interactive prescribing handbook, relevant to UK undergraduate students to support the development of their prescribing skills. To work collaboratively across medical and pharmacy professions and institutions to develop the iBook.

DESCRIPTION OF WORK

KW (MMS) recruited members of staff across institutions and professions to help create an interactive iBook, supporting skills and knowledge development related to prescribing. A learning technologist from the MIMAS team constructed interactive chapter elements, including video clips, 3D models and interactive HTML self-assessment widgets. These components produce an active learning environment for students and were created using formats that could be delivered via iPads as an iBook, or transferred for delivery in other online virtual learning environments.

DISCUSSION

A collaborate approach was undertaken to develop the iBook, through face-to-face and virtual meetings and cloud computing. This facilitated expertise sharing and inter-professional working. As the development of the prescribing iBook evolved, it became apparent that the content is relevant not only to medical students, but could also address prescribing and prescribing related learning needs for undergraduate pharmacists, nurses and other healthcare professions. Through the development of the iBook, the team aims to bring prescribing teaching to a new technology platform, easily accessible and relevant to an interprofessional cohort of students.

CONCLUSIONS

The development of the prescribing iBook presents an exciting opportunity to engage with students across healthcare professions to augment their prescribing learning in a current, relevant and easily adaptable format.

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36. Healthcare Professionals Perspectives of Inter-professional Education in the Practice Setting: More Bridges to Cross!

Mrs Olufemi Abiola Lawal[1] and Vasso Vydelingum[2]
[1]MAU, Frimley Park Hospital, [2]Faculty of Health and Medical Sciences, University of Surrey, Guildford.

INTRODUCTION

Effective collaboration amongst healthcare professionals in practice to improve the quality of care provided is a must and Inter-Professional Education (IPE) has been found to be an effective means of achieving this.

RATIONALE

Research has explored the under-graduates experience and perception of IPE but little is known of the post-graduate healthcare professionals in practice where fragmented care and failure of team working has been evidenced on occasions when things went wrong.

OBJECTIVE

To explore the healthcare professionals experience and perception of IPE in practice.
Purpose: To add to the body of knowledge and inform practice by finding ways of improving the quality of care provided to service users.

RESEARCH QUESTIONS

Does IPE actually promote and influence practice? Are there factors that promote / inhibit IPE in practice?

METHODOLOGY

A qualitative interpretive phenomenological research design with a purposive sample of 18 healthcare professionals, recruited from one NHS trust in the United Kingdom. Data were collected from 3 cohort focus groups of 4-8 healthcare professionals following ethical approval and subject to step-by-step thematic analysis.

FINDINGS

Emerging themes and issues discovered were expressed as bridges to cross and grouped as The pre-experience, Experience, and Post-experience of IPE: Unfamiliarity, fear of losing roles in relation to professional identity, gaps in the contents, delivery and teaching style for IPE, the economic and financial bridge.
Empowerment and ownership feeling were evidenced as improving quality of care

CONCLUSION

Although organisations are making the effort at promoting IPE, there are still bridges to cross to further improve collaboration and team working amongst post-graduate healthcare professionals in practice. Managers in healthcare need to embrace IPE. Educators in practice need to proactively introduce IPE during mandatory trainings, while post-graduate healthcare professionals need to engage more in IPE and IPP.

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37. Interprofessional learning: Medication safety and practical prescribing

Jessica Clemerson
University of Sunderland

INTRODUCTION

This project was a response to regional and national policy in which medication safety issues were identified as a priority clinical theme. The project has developed significant resources and overcome logistical barriers in order to provide educational opportunities for more than 400 pharmacy, nursing and medical students each academic year.

OBJECTIVES

The project aimed to aid the transition of students from undergraduates to qualified practitioners who are expected to work effectively in a multi-disciplinary environment and provide safe and effective medication regimens to patients. A further aim of the project was to enhance the response to patient safety incidents involving medicines by embedding 'lessons learned' in training opportunities.

DESCRIPTION

An inter-professional learning project has been providing teaching and learning opportunities around medication safety and practical prescribing for medical, pharmacy and nursing students in the latter stages of their undergraduate training throughout the North East of England. Teaching materials have been developed which include short cases to teach practical prescribing skill and raise awareness of medication safety issues and longer cases which follow the journey of a patient from admission to hospital, through management of an acute illness and review of chronic medications to discharge from hospital. These cases highlight good prescribing practice in key therapeutic areas (pain, diabetes, respiratory, gastro-intestinal and cardiovascular disease) as well as how errors can occur.

CONCLUSIONS

This project has demonstrated how inter-professional teaching can be delivered to large student cohorts involving multiple HEIs. It demonstrates the development of teaching materials which are inclusive to multiple professional groups.

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38. Pre-Prescribing: Delivering a 'real' workplace prescribing experienced for medical students

Effie Dearden
University of Edinburgh

INTRODUCTION

A major challenge of prescribing education is the critical change in role from final year medical student to Foundation Year 1 (FY1) doctor. FY1 doctors, who do the vast majority of hospital based prescribing, have identified a lack of practical prescribing skills as a major concern when they start to practice. In response to this the General Medical Council has recommended that medical students should be allowed to 'prescribe under supervision'(Dornan et al. 2009) prior to graduation.

OCJECTIVES

The objective of the Edinburgh Pre-Prescribing project is to provide medical students with a 'real' concrete experience of writing prescriptions on hospital drug charts for patients on the ward.

DESCRIPTION

Final year medical students write prescriptions for patients (for example prescribing usual medications on admission, prescribing medications recommended on a ward round or re-writing full drug charts), these are then checked prior to counter-signature by a doctor (Smith et al. 2012). Large fluorescent stickers with the student's name alert nursing and pharmacy staff to the presence of pre-prescriptions and encourage students to feel a sense of ownership of the work.

RESULTS

On-going audit shows this to be a safe approach to teaching which is acceptable to both students and staff (Smith et al. 2012). A comprehensive audit has shown that counter-signed pre-prescriptions are less likely to contain error than prescriptions written by FY1 doctors alone, it is likely that double checking of prescriptions plays a part in this finding (Hume et al. 2012). Work is also ongoing to look at factors impacting on student engagement in pre-prescribing and the effect that pre-prescribing has on student engagement in the clinical environment.

CONCLUSIONS

We have shown that it is possible to set up a safe protocol to allow final year medical students to prescribe under supervision in a clinical environment.

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WORKSHOP ABSTRACTS

39. Prescribing skills awareness workshop

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INTENDED AUDIENCE (EXPERIENCE LEVEL AND PRE-REQUISITES)

Novice and experienced tutors in undergraduate healthcare education.

INTRODUCTION

Prescribing medication requires the coordination and consideration of multiple factors; these include diagnostic skills, and consideration of the efficacy, safety, patient factors and cost-effectiveness of possible treatments. Safe, effective prescribing is a core clinical attribute.

Experienced doctors use these skills repeatedly in their everyday practice, often in an 'unconsciously competent' way. The reasoning that takes place in order to make such complex decisions is often unclear to students. While most doctors master these skills through experience, it is important to consider how we can support their development in our students. The facilitated acquisition of these skills will allow students to practice safely and effectively from the beginning of their professional lives.

This is even more important now that current working practices have reduced exposure of both students and junior doctors to clinical cases.

Tomorrows Doctors 2009 emphasises the requirement that medical students are able to "prescribe drugs safely, effectively and economically" and are able to critically appraise "the prescribing of others". This workshop describes a mixed methods approach to meeting the challenge of developing students' prescribing skills resulting from collaboration between Manchester Medical School, Keele Medical School and the National Institute for Health and Clinical Excellence.

WORKSHOP OBJECTIVES

This 60 minute workshop will provide an interactive environment for participants to:

- Reflect on their own teaching of prescribing skills
- Explore the importance of clinical reasoning and metacognition in prescribing decisions
- Identify suitable teaching and learning strategies for students at different levels
- Explore and share methods for the teaching and learning of prescribing skills

WORKSHOP METHODS

A brief, initial presentation will ensure that delegates have a common starting point before exploration of the issues through facilitated small group discussion.

To conclude, a brief plenary will pull together the salient learning points from each of the small groups.

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40. Interprofessional simulation - An effective learning environment for undergraduate healthcare professionals

Facilitators Clare Cann[1], David Singleton[2] and Pam Bradley[1,3]
[1]School of Medicine, Cardiff University, [2]Laerdal UK (SW Regional Manager) and [3]School of Pharmacy and Pharmaceutical Sciences, Cardiff University

OBJECTIVES

Demonstrate the use of simulation based learning using SimMan™, to promote interprofessional team work based on a scenario involving the management of anaphylaxis.

INTENDED AUDIENCE

Participants with an interest of using simulation based learning to promote interprofessional education. It would be useful to have some working knowledge on the use of simulation to get the best out of this session.

BACKGROUND

Simulation based learning provides a safe and supportive educational environment. It allows users at all levels, from novice to expert, to practise and develop skills with the knowledge that mistakes carry no penalties or fear of harm to patients or learners. It encourages the acquisition of skills through practice and experience, ideally in a realistic situation or environment, and can stimulate reflection on performance through feedback and debriefing. Clinical simulation is a technique that enables the learning and training of individuals and teams through the re-creation of some aspect of the real clinical situation. The major limitations are the high costs and the need for qualified instructors.

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41. What Ways can Technology be part of the Solution for Antimicrobial Stewardship? Review of the Evidence from the UK NHS, Case Study from a leading teaching hospital USA

Facilitators: JAC and ICNet Product Development and Lead Antimicrobial Pharmacist (TBA)

INTENDED AUDIENCE (EXPERIENCE LEVEL AND PRE-REQUISITES)

All pharmacists, microbiologists, infection control practitioners, clinicians/GPs with prescribing authority, students of the above practices

INTRODUCTION

ICNet and JAC supply innovative technology across the NHS and to hospitals globally which helps to automate prescribing processes and improve accuracy of both prescription and therapies. The current DoH warning on the prudent use of antibiotics gives a sense of urgency to all those clinicians and pharmacists having full awareness of the issues involved and an awareness of what solutions exist to enable greater communication and reduced drug error. This workshop would aim to bridge that knowledge gap with the below learning outcomes and ensure participation at the Workshop by a leading antimicrobial pharmacist or microbiology consultant who can discuss the evidence with the assembled group.

WORKSHOP OBJECTIVES

Understand key ways in which technology can assist in Identifying appropriate therapies, particularly antibiotics, and broaden understanding of the issues involved in identifying MDROs i.e.

- improving the flow of information and communication between prescribers, nursing and pharmacy
- improve the appropriateness, safety and timeliness of medicines that are prescribed and administered to patients
- measure clinical and operational performance can be continually monitored and improvements identified

Cover key risk areas of inappropriate prescribing and clinical risk management:

Discuss and explore: allergy, interaction, duplicate checking, structured prescribing process, use of treatment protocols.

Educate and evaluate ways to target Reduction in C.diff and MRSA outbreaks through clinical monitoring

Responsible use of local antibiograms

LEARNING OUTCOMES

Understand the key uses for technology in antimicrobial stewardship

Basic understanding of use and differentiation of technology on offer in the NHS

How to read the antibiogram matrix and use technology to identify resistance patterns

Warnings on misuse from the Antimicrobial Pharmacist

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42. "Preparing tomorrow's healthcare workforce- interprofessional educational models from Aberdeen"

Facilitators: Lesley Diack, Morag McFadyen, Jenni Haxton and. Kim Munro
Robert Gordon University, Aberdeen

INTENDED AUDIENCE (EXPERIENCE LEVEL AND PRE-REQUISITES)

This workshop will enable participants from any health background to explore some of these diversifications by engaging in activities demonstrating how IPE spans an undergraduate curriculum. There will be four phases with discussion time in-between.

BACKGROUND

The interprofessional education (IPE) programme in Aberdeen has been in place since 2003. Commencing with medicine and pharmacy it has expanded to include: applied biomedical science diagnostic radiography; dietetics; midwifery; nursing; nutrition; occupational therapy; physiotherapy and social work. To cater for these different courses the programme has been diversified using blended learning strategies and innovative technologies.

WORKSHOP METHODS

Participants will commence with the iPEG game, similar to Monopoly it enables players to grasp the intricacies of different professional roles and responsibilities. The aim is to foster respect and to break down stereotypes by writing, drawing, miming, and role playing scenarios.

The next part of the workshop will focus on IPE in Practice settings. Facilitators will share patient safety learning strategies in the perioperative journey and discuss errors in safety checks from ward to theatre to recovery. They will learn the essentials of prescribing errors by engaging with the materials used in a project with medicine and pharmacy.

The workshop will then demonstrate the innovative technologies involved in creating virtual communities of interprofessional buddy groups. The real case scenarios used by students will be shared. The serendipitous learning achieved through the IPE buddy groups has been crucial to their acceptance of each other as equal partners in delivering health and social care.

Finally the participants will explore the diversities of IPE within the Aberdeen programme by tasting activities from the Arts and Humanities and Strictly Come Dining events to demonstrate how curriculum developers need to maintain relevance and inclusivity in IPE.

The research evidence developed within the Aberdeen models will be shared with the audience throughout the workshop.

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43. Practice-based interprofessional learning for medical and pharmacy students on polypharmacy in the elderly to ensure safe prescribing

Facilitators: Liz Anderson (Nurse), Neena Lakhani (Pharmacist) and Suzanne Dawson (Geriatrician)
University of Leicester

INTENDED AUDIENCE (EXPERIENCE LEVEL AND PRE-REQUISITES):

The workshop is suitable for academic and practice educators concerned with practice-based learning in clinical environments.

OBJECTIVES

To share a replicable patient-centred model of practice-based Interprofessional Education (IPE)

Show how educational theory underpins this learning process

Analyse how IPE can engage and help front-line practice and improve patient safety

Share our steps to embed IPE for safe prescribing within the curriculum of pharmacy and medical students

BACKGROUND

We have used a theoretical approach to practice-based IPE informed by the Kolb learning cycle, known as The Leicester Model of IPE. We have found that allowing students to experience clinical responsibilities working alongside actual professional teams, with patients, enhances learning. In addition students learn about the complexity and the benefits of interprofessional working for safe practice. For two years we have placed over 175 medical and pharmacy students (n=350+) to learn together through examining the prescribed drugs for elderly in-patients on acute hospital wards using this Model. Mixed professional student groups are prepared at an interactive workshop and then work on the wards, with consented patients, to conduct a medicines management review. They discuss the drugs with the patient and examine the drug charts and look up diagnostic test results. They apply the World Health Organisation 'STOP START' principles and identify concerns. The groups present their patient-study findings to hospital clinicians and pharmacists. The minor and major drug issues identified are subsequently fed back to clinical practice. Our research using pre and post- intervention tests with mixed-methods identifies that students highly value this learning. The learning is offered every eight weeks throughout the year.

We will share our experiences as outlined here to prompt group interactive learning and enable attendees to plan and design new innovative IPE events within clinical practice based on a patient engagement.

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