

Higher Education Open Educational Resources

(<http://open.jorum.ac.uk/xmlui>)

Subjects Allied to Medicine by Title

(<http://open.jorum.ac.uk/xmlui/handle/123456789/42/browse?type=title>)

Acids, Alkalis and Bases: an Introduction

This learning object defines and explains acids, bases, and alkalis, from an ionic standpoint, and introducing the pH scale.

The Anatomy of the Liver

Anna-Lena Olofsson (eViP Virtual Patient)

This is the story about a Virtual Patient called Ana-Lena Olofsson. The case describes a 15 month old girl with a history of loose stools and failure to thrive. As the case progresses you are able to determine a provisional diagnosis based on the history and examination findings. You have to decide on some initial investigations and interpret the results appropriately. By proceeding to specialist investigations you are able to confirm the diagnosis and then formulate a management plan.

Antiretroviral treatment programmes in Nepal: Problems and barriers.

The main aim of this study is to identify barriers and obstacles to providing and expanding ARV programmes in Nepal. Materials and methods: A qualitative approach consisting of in-depth interviews with three groups of stakeholders: policy makers, ARV service providers and ARV recipients were carried out. The transcripts were analysed using a thematic approach. Results: The estimated number of people in need was high compared with people currently receiving ARV in Nepal. With regards to the proper distribution of the ARVs, the main problems identified in the interviews were: lack of infrastructure, lack of human resources, financial constraints, programmatic problems, weak leadership and management at national level, poor cooperation between management structures, geographical barriers, lack of awareness and low uptake of counselling and/or testing, stigmatization and discrimination felt by the health workers and the community, lack of coordination and limited access to services.

The Biology of Pain

A visual representation of the anatomy and physiology of pain which includes editable links to online resources.

Calculating Medicines for Children

This learning material is aimed at providing examples of how to calculate medicines, specifically for children but it relates well to any aspect of calculating medicines.

Catherine Miller (eViP Virtual Patient)

This is the story about a Virtual Patient called Catherine Miller. She is a 5 month old girl who is brought into the Emergency Department by her Father with a high temperature. As you progress through the case you have to interpret the examination findings and then investigations to reach a diagnosis and then formulate a management plan. The potential long term complications of the diagnosis are also discussed.

The Cell Cycle, Mitosis and Meiosis

This learning material is about the life cycle of a cell and the series of stages by which genetic materials are duplicated and partitioned to produce two daughter cells with the same genetic component as the parent cell.

Critical Reflection (online version)

This resource is aimed primarily at students in healthcare practice to get them to reflect on their experiences and practice. The package explores the meaning and process of critical reflection, described by one author as "the process of looking back on what has been done and pondering on it and learning lessons from what did or did not work". The package has sections on areas such as Reflective Models (Gibbs, Johns, Driscoll), Self-assessment Tools, Practical Skills, and many other topics.

Crossword - Introduction to Receptor Pharmacology

This Learning resource is one of a series of Pharmacology titles released as part of a clinical Skills mini-project. The learning material uses a crossword to assess your knowledge on the different receptor types and how drugs interact with them.

Determining the importance of clinical trial results

This learning material demonstrates how to interpret and use clinical trial data (ARR, RRR, NNT, NNH, and confidence intervals) in practice.

Developmental Genetics

By the end of this material you would have learnt about: The way in which genes control the growth and development of an organism throughout its life-cycle. The processes involved in creating an organism from a single cell.

Dissertation Handbook 2008-9

A detailed guide to producing a dissertation in health promotion/public health for the 2008/9.

Dissertation: Making Sense out of all that Quantitative Data

This is one of a series of audio podcasts that provides advice and guidance for several of the stages of the dissertation process. This OER discusses some hints and tips on writing-up the quantitative data to aid the creation of concise, interesting and relevant results.

DNA Genes and Chromosomes

By the end of this learning material you would have learnt about the components of a DNA and the process of DNA replication, gene types and sequencing and the structural properties of a chromosome.

Electrotherapy in Physiotherapy - Interferential

Electrotherapy in Physiotherapy - Pulsed Shortwave Diathermy

Electrotherapy in Physiotherapy - Ultrasound

Elements that make up the human body

Introducing the periodic table of elements, and identifying the major elements involved in the human body and their roles.

Ethics and Midwifery Research

A power point presentation providing a lecture and activities that will look at the origins of modern ethical thinking. It describes the system of ethical governance in the UK and looks to introduce the main ethical research issues and explore some of the dilemmas that researchers face.

Evaluation techniques

This is a module framework. It can be viewed online or downloaded as a zip file. As taught in Autumn Semester 2009/10 The 'Evaluation Techniques' module is one of the core modules taught on the Masters in Public Health which is offered by the Division of Epidemiology and Public Health at The University of Nottingham.

Finding and Appraising the Evidence

The ability to find and appraise published research is fundamental in our ability to provide effective and efficient healthcare. These modules take you through the process of how to find the evidence and then understand how to assess the validity and reliability of the research found. Online interactive learning resource from HealthKnowledge website, for Public Health practitioners, healthcare workers and all those wishing to increase their public health skills.

Florian (eViP Virtual Patient)

This is a story of a Virtual Patient called Florian. He is a baby born prematurely at 34 weeks gestation and you are responsible for his management at delivery and beyond as you progress through the case. Your decisions will determine the outcome and you will need to make a diagnosis and decide on management including ventilation of the baby and associated complications.

Foundations in evidence based practice

This is a module framework. It can be viewed online for download as a zip file. As taught in Spring Semester 2010. This module is taught on the Diploma/BSc in Nursing and covers an introduction to evidence-based practice; the nature of evidence; an introduction to the research process; reflective thinking and writing; portfolio development skills; searching/accessing information/literature; summarising literature; referencing literature sources; reviewing literature; an introduction to law

and ethics and their links with evidence-based practice; an introduction to accountability and evidence-based practice.

Gateways to Health

Gene Expression and Regulation

By the end of this learning material you would have learnt about: The process by which the genetic code directs protein synthesis to produce the structures of a cell The cellular processes that control the rate and manner of gene expression.

Genomics and the Human Genome Project

By the end of this material you should have learnt about: The genome of an organism i.e. the structure and function of an organism's genetic material; The purpose and function of the human genome project.

Global Perspectives in Public health and Health Promotion

9 Powerpoint slide sequences based on MSc lectures from a global prespecitves module that, adoting a social science perspective, explores the trends, issues and context of global public Health and Health Promotion.

Haemagglutination-inhibition Assay

Animated tutorial on haemaggutination-inhibition assay for the presence of specific antiviral antibody in serum. Audio commentary.

Hand hygiene

Aimed at healthcare practitioners, this learning object describes why hand hygiene is so important in a healthcare setting, then uses video clips to demonstrate correct, and incorrect, hand washing techniques.

Handbook Principles Perspectives and Practice in Health Promotion

Module Handbook for a core health promotion module

Health and Lifestyle of Nepalese Migrants in the UK

The health status and lifestyle of migrants is often poorer than that of the general population of their host countries. The Nepalese represent a relatively small, but growing, immigrant community in the UK, about whom very little is known in term of public health. Therefore, our study examined the health and lifestyle of Nepalese migrants in the UK.

Health Promotion

Health Promotion, Health Education and HIV/AIDS

This article will focus on the role that health promotion can play in preventing the transmission of HIV. The school setting is taken as an example and a range of effective methods and approaches focusing on young people are identified. It gives an outline of the nature of health promotion, followed by consideration of school-based efforts, which aim to protect the future generation, and a summary of some of the strategies that have been effective in this setting. Finally, issues related to health and monitoring health status are then very briefly addressed.

HealthKnowledge Public Health Textbook - Disease causation and the diagnostic process

Disease causation and the diagnostic process in relation to public health; prevention and health promotion' is part of the 'Public Health Textbook' which can be accessed as an online resource. It covers part of the public health skills and competencies and has been organised in relation to the Faculty of Public Health Part A membership examination syllabus.

HealthKnowledge Public Health Textbook - Health Information

'Health Information' is part of the 'Public Health Textbook' which can be accessed as an online resource. It covers part of the public health skills and competencies and has been organised in relation to the Faculty of Public Health Part A membership examination syllabus. It focuses on three main areas: populations; sickness and health; and applications (ways of putting it into action).

HealthKnowledge Public Health Textbook - Medical Sociology, Social Policy, and Health Economics

'Medical Sociology, Social Policy, and Health Economics' is part of the 'Public Health Textbook' which can be accessed as an online resource. It covers part of the public health skills and competencies and has been organised in relation to the Faculty of Public Health Part A membership examination syllabus. It focuses on three main areas: Concepts of Health and Illness and Aetiology of Illness; Health Care; Equality, Equity and Policy and Health Economics.

HealthKnowledge Public Health Textbook - Organisation and Management

'Organisation and Management of Health Care and Health Care Programmes from a Public Health Perspective' is part of the 'Public Health Textbook' which can be accessed as an online resource. It covers part of the public health skills and competencies and has been organised in relation to the Faculty of Public Health Part A membership examination syllabus. It focuses on three main areas: Understanding Individuals, Teams and their Development; Understanding Organisations, their Functions and Structure; Management and Change; Understanding the Theory and Process of Strategy Development and Finance, Management Accounting and Relevant Theoretical Approaches.

HealthKnowledge Public Health Textbook - Research Methods

'Research methods appropriate to public health practice, including epidemiology, statistical methods and other methods of enquiry including qualitative research methods', and is part of the 'Public Health Textbook' which can be accessed as an online resource. It covers some of the public health skills and competencies and has been organised in relation to the Faculty of Public Health Part A membership examination syllabus.

Healthy Living - Breathing Techniques

Miranda Thew from Leeds Met talks us through a useful breathing technique that will help to keep you relaxed and stress free.

The Historical Origins of Public Health

A presentation giving the Historical origins of Public Health from the definition of public health through to the different perspectives that various civilisations have had over the years.

Homely Remedy Protocols: A solution to the supply and administration of non-prescription medicinal products and dietary supplements.

Patient Group Directions, although widely used since their introduction in the late 1990s, are not widely reported in the literature. However, when described, it is recognised that their use are inappropriate for non prescription medicinal products or for use outside NHS settings. This paper thus describes a suitable alternative to Patient Group Directions, for use in research participants requiring non-prescription medicinal products in their own homes, the Homely Remedy Protocol.

Hungry in Hospital, Healthy in Prison

This Power Point presentation gives a comparative study of the foodservice that is offered in hospitals and the foodservice offered in the prison system.

iCase Influenza Outbreak Documents

Supporting documents to accompany Influenza Outbreak: protocols, analysis planner, memo, outbreak reports

Immunology basics

This is a module framework. It can be viewed online or downloaded as a zip file. As taught Autumn semester 2009 Infections are a major cause of morbidity and mortality worldwide. The body fights infection through the functions of the immune system, whose power has been harnessed by the development of vaccination (immunisation).

Improving Health: Public Health - Getting back to basics

This presentation explores some of the theories and tools which can be applied in order to set up an effective public health improvement initiative. Notes have been included to assist the facilitator with the presentation. This resource was developed by Education for Health, which is an independent education and research charity for health professionals.

Improving the Health of the Population and Evidence Based Medicine

This module has two essential components: Evidence-Based Medicine and Public Health. Evidence-Based Medicine was introduced as a new discipline because traditionally the teaching of medicine was heavily reliant on an apprenticeship-type system with emphasis on learning from observing one's teachers. One of the guiding principles in the NHS today is that all health care should be based on research evidence. One of the aims of this module is to cover core concepts in epidemiology and basic statistics so that you are able to understand the evidence presented in research papers and apply it to your clinical practice. The Public Health component of this module will provide you with insight into the factors affecting the health at a population level and how these may be addressed. It also aims to show how these factors may be distributed and how this can contribute to inequalities in health between populations.

Inaugural Lecture - Dr Adam Carey

Inaugural Lecture - Dr Adam Carey: A nutritional path to improved human performance International Classification of Function, Disability and Health

Inaugural Lecture - Ieuan Eliis - Health Care Education in the Long Run

Inequities In Health and Well Being; The Evidence Base for Children Centres

Inequalities in health are: "Differences in the prevalence or incidence of health problems between individual people of higher and lower socio-economic status". Inequities in health are these differences but articulated as being preventable, unjust and wrong. This presentation gives a perspective into the Evidence Base for Children Centres.

Inequities In Health: A Global Perspective

Inequalities in health are: "Differences in the prevalence or incidence of health problems between individual people of higher and lower socio-economic status". Inequities in health are these differences but articulated as being preventable, unjust and wrong. This presentation gives a global perspective of these inequalities.

The Inflammatory Response

Describes the inflammatory response - a series of local cellular and vascular responses which are triggered when the body is injured or invaded by micro-organisms or antigen.

International Classification of Function, Disability and Health

This package was originally designed for undergraduates in Medicine at the University of Nottingham. It will also be useful to students in nursing, allied health professions and pharmacy. Practitioners in these fields, who are new to the ICF, will also find it a useful introduction. It describes the International Classification of Functioning, Disability and Health (ICF), a classification system published by the World Health Organisation to describe health status. This system is widely used in rehabilitation research and practice to describe impairments of body structure and function and how these impact on activities and participation. By the end of this package you should be able to: - List and describe the five domains of the ICF. - Apply the ICF to real-life patient scenarios in order to understand your patient's health status.

Inter-professional Learning Level One Workbook

A Workbook for Pre-registration Health and Social Work Students

Inter-professional Learning Level Two Workbook

INTER-PROFESSIONAL LEARNING PART TWO A Workbook for Pre-registration Health and Social Work Students.

Intramuscular injection by the Z-Track Technique

Intramuscular injection by the Z track technique explains and demonstrates a safe technique for administering an intra-muscular injection.

Issues and Challenges of HIV/AIDS Prevention and Treatment Programme in Nepal

This paper explores some of the key issues and challenges of government HIV/AIDS prevention and treatment programme in Nepal. Providing HIV/AIDS prevention and treatment services in Nepal is associated with a number of issues and challenges which are shaped mostly on cultural and managerial issues from grass root to policy level. Numerous efforts

have been done and going on by Nepal government and non-government organization but still HIV prevention and treatment service is not able to reach all the most at risk populations because cultural issues and managerial issues are obstructing the services. The existing socio-cultural frameworks of Nepal do not provide an environment for any safe disclosure for person who is HIV infected. Thus, there is an urgent need to address those issues and challenges and strengthen the whole spectrums of health systems through collaborative approach to achieve the millennium development goals. It will be the purpose of this paper to contribute to the policy makers by exploring the pertinent issues and challenges in the HIV/AIDS programme.

John M (eViP Virtual Patient)

This is the story about a Virtual Patient called John M. He is a little boy who is nearly 3 years old and is brought into Paediatric A&E with bruises. As the case progresses you have to decide on the important aspects of the history and then proceed to investigations in order to make a diagnosis. Depending on your management you have to deal with some associated medical complications.

Key Ideas in Health Promotion

1 hour video lecture introducing students to module about Health Promotion - key ideas, models, concepts, reading, literature sources

The Liver and Drug Metabolism

The role of the liver in the metabolism of drugs.

Lost in Translation: Reflecting on a Model to Reduce Translation and Interpretation Bias.

This paper reflects on the language and translation challenges faced and interventions used whilst undertaking cross-cultural public health research in Nepal using translators. Background: The growth in cross-cultural studies and international research highlights the use of translators and the associated challenges for researchers with regard to cultural and linguistic issues when collecting data in one language and analysing and reporting in another. The specific challenges when using translators are frequently overlooked in the research literature and translators and the interpretation processes omitted from the research methodology and/or discussion. The methods used: The experiences and challenges for an English-speaking nurse researcher working with a team of translators in a

cross-cultural study on the sexual and reproductive health (SRH) of young people in Nepal, in 2006, is explored in this paper. The paper employs a case study approach.

Making and Running an Agarose Gel

This OER consists of an instructional video produced by GENIE CETL in the Department of Genetics and University of Leicester Audio Visual Services.

Marginal Analysis and Programme Budgeting

Meeting individual health needs and improving the health of populations within a finite budget is a challenge for health systems worldwide. Programme budgeting and marginal analysis (PBMA) is a tool for tackling this, and for putting some science behind the art of managing scarcity and competing demands. This module explores the definitions, tools and practical application of PBMA. Online interactive learning resource from HealthKnowledge website, for Public Health practitioners, healthcare workers and all those wishing to increase their public health skills.

My House

This learning material takes an interactive tour of the house of a person with Learning Disabilities. As the owner of the house shows us around we are introduced to aspects of "Careless Care." That is to say the small things that we take for granted in our own homes, but may be overlooked in such a supported living environment. The content for the resource was developed by student learning disability nurses. It formed part of a project to develop resources that would inform and challenge other health care professional students about their interactions with people with learning disabilities. Poor attitudes and a lack of understanding of this client group by health care professionals has been shown to result in serious consequences, as highlighted by the 2007 Mencap report "Death By Indifference" The project was based on the premise that student nurses themselves would be best placed to influence the attitudes of their peers. The resource was initially aimed at student nurses and was formally released in June 2009. However, it is already being used with other health care professionals who are already in practice for in-service training, and with service-users and their carers. Initial evaluations are very positive with all groups. The work has been presented at a number of fora and conferences and has been received very positively as a unique resource in this area.

Number for Nurses: Division

The Number for Nurses Computer Assisted Learning Package begins with a basic principles section which is followed by application to nursing practice. The basic principles section deals with addition, subtraction, multiplication, division, S.I. units and scales and gauges. In each area a variety of methods are used to enable the student to understand these principles, through interactive tutorials and consolidate learning through exercises. The aim of the division section is to help the student become competent both in the recognition of factors in fractions, and the ability to transfer simple fractions into long division format. These skills are particularly relevant during clinical practice as the nurse will be expected to utilise these methods to accurately calculate the drug dose to be administered to a patient. The package can be accessed from the first year of the course and it is expected that the student will work through the basic principles section first. The application section will support the student through the second and third years of the course, as they become involved in the more complex elements of nursing skills. By the end of the third year the package should have enabled the student to gain the competency in application of number skills which will facilitate the transfer to qualified nurse status.

Numbers needed to treat, numbers needed to harm

This learning material considers how to measure and interpret the magnitude of effect in clinical trial results using number needed to treat (NNT) and number needed to harm (NNH).

Öga (eViP Virtual Patient)

This is the story of a Virtual Patient called Öga. She is a 3 year girl originally from Turkey who presents with a history of chronic cough to your respiratory clinic. As you proceed through the case you are able to evaluate the important aspects of the history and clinical examination. By interpreting specialist investigations you are able to make a diagnosis and formulate a management plan as well as managing some complications.

Patient Experience and Satisfaction with Hospital Food Service

Outlining patient experience and satisfaction with hospital foodservice.

Patient Voices Programme

Collection of digital stories about health and social care. This collection has videos, sample workbooks, papers and other supporting materials.

Patterns of Inheritance

By the end of this material you would have learnt about: How traits and characteristics are passed on from one generation to another The different patterns of inheritance Genomic or parental imprinting Observations

Physiology of the liver

A Planning Guide: Health Inequalities and the Voluntary and Community Sector

A guide to the issues and advice on how to address health inequalities, produced by the Royal Society for Public Health. This resource was prepared following extensive field work with experts.

Plasma Proteins and Drug Distribution

Examining the role of plasma proteins in the blood in the distribution and elimination of drugs in the body.

Post-natal Contraception

This power point presentation looks at and discusses the role of the midwife during contraception. It provides a lecture and also activities that will consider important considerations for women relating to contraception.

Principles & Practice for non-Pharmacological preventative Intervention (BM, BVSc, etc.)

This resource aims to offer tutors flexible options for small group teaching about behaviour change in the clinical context with regard to smoking behaviour, weight reduction and alcohol consumption - it allows for more or less depth in various areas, with links to resources and options for role play/discussion/quiz to introduce medical students to approaches to for behavioural change in the clinical context, as applied to smoking, weight reduction and alcohol; by the end of the session, students should be familiar with the 5 As, the stages of change model and be able to identify

good practice with regard to brief intervention in this context, will be able to identify appropriate sources of information and data. It can be used in a lectures for Phase 3 medical students.

Relative Risk Reduction and Absolute Risk Reduction

This learning material considers how to measure and interpret the magnitude of effect in clinical trial results using relative risk reduction (RRR) and absolute risk reduction (ARR).

RIAlity

Radio immuno assay (RIA) is a technique for measuring concentrations of antigens. Although better techniques have subsequently been developed from it, understanding RIA forms the basis for understanding these derivatives. RIA belongs to the family of competition assays which are widely used in science, medicine and related industries to measure the concentrations of biologically active molecules. This package introduces the concepts of RIA and will be useful to anyone wanting to understand how this family of techniques work.

Screening

This comprehensive yet succinct module on screening will help the experienced practitioner to expand their teaching methods, and it will get the novice up to speed on the evaluation and delivery of screening. The first part covers evidence about screening, and the second part comprises four further chapters covering skills relating to application of this evidence in daily practice.

Smoking in Pregnancy

A Power Point Presentation including lecture and activities, looking at smoking in pregnant women. These slides look at the physiology of smoking and the general behaviour of women who smoke while pregnant.

Solutions and Electrolytes

Examining the mechanisms of chemical solution and how solvents work, and the roles of ions and electrolytes in chemical activity within the body.

Sports Soft Tissue Injury

A presentation given to highlight types of injuries that can happen to soft tissue and the underlying factors that can lead into other related incidents.

Steps in Conducting a Systematic Review

This learning material outlines the five fundamental steps to conducting a systematic review of health care research so as identify, select and critically appraise relevant research.

Surrogate Outcomes

This learning material considers the type of evidence which should be used when making decisions about patient care.

"That's how we do it...we treat them all the same": an exploration of the experiences of patients, lay carers and health and social care staff of the care received by older people with dementia in acute hospital settings.

A PhD thesis submitted at Bournemouth University in 2008. This study aimed to explore the experiences of patients, lay carers and health and social care staff of care received by older people with dementia in the acute hospital setting.

The Anatomy of the Kidneys

Aimed at pre-registration Nursing students studying human biology, this learning object introduces the external and internal anatomy of the kidney, including the anatomy of nephrons and corpuscles.

The Physiology of the Kidneys

Aimed at pre-registration Nursing students studying human biology, this learning object introduces the physiology of the kidney, examining the processes by which the kidneys filter blood, control body pH and eliminate the waste products of metabolism from the body.

Toolkit: 'How to Make Your Case for Education & Training'

This is a unique business case toolkit around Improving Health offering any professional in health and social care a simple, effective way to produce business cases to successfully secure funds for their continuing professional development. It contains an evidence based, module specific business proposal for health professionals to use to establish their current levels of knowledge, understanding and experience, and plan development of their competencies within the framework of the health needs of their practice population in a way which is meaningful to the QoF, KSF and National Workforce Competencies.

Understanding and Classifying a Stroke

Stroke is the third largest cause of death in the UK after heart disease and cancer. It is also the single leading cause of severe disability in the UK. Classification of stroke is crucial in planning treatment and is a good indication of prognosis This Learning Object helps individuals understand how to make the diagnosis of stroke using the Oxford Stroke classification. It is suitable for any health care professionals involved in the management of stroke but especially doctors and medical students OBJECTIVES: * To develop an understanding of the different symptoms and signs seen in stroke * To be able to classify the type of stroke using the Oxford Stroke classification * To relate the clinical diagnosis to the likely anatomical lesion and pathology * To understand the importance of the clinical classification in estimating prognosis Please note that all persons were filmed with their consent.

A virtual practice community for student learning and staff development in health and social work inter-professional education; changing practice through collaboration

This resource is the final report for the a Health Sciences and Practice mini project: A virtual practice community for student learning and staff development in health and social work inter-professional education; changing practice through collaboration.

Why do we need confidentiality?

A scenario based learning material that covers the need for confidentiality and informed consent in a medical context

Medicine and Dentistry by Title

(<http://open.jorum.ac.uk/xmlui/handle/123456789/39/browse?type=title>)

Abdominal Examination

This procedural skills video shows a basic abdominal examination being undertaken by Dr Michelle Downie from St George's, University of London. The content of this video is licensed by the Creative Commons and anyone is free to use this video for educational, personal, and non-commercial purposes only.

Acute Appendicitis

The pathology, diagnosis and management of acute appendicitis. The essentials for that surgical FY1 placement!

Acute Pancreatitis

This podcast will revise the causes, pathophysiology and management of this common surgical condition.

Ageing Eye

This resource starts with a diagrammatic comparison between the structures of a normal and an ageing eye. The topic contains an image which is simulated to compare normal vision against blurred and discoloured vision. The same image is again simulated to show the effects of glaucoma and macular degeneration vision. Each image is accompanied by respective text to explain key differences.

Amount & Concentration - Making Solutions - Mole & Molar

A learning resource that introduces making solutions with reference to moles and molar.

Amount & Concentration - Practice Questions

Ten question interactive test on amount and concentration

Anaemia

A systematic approach to the patient presenting with anaemia. Review of iron deficiency and megaloblastic anaemia.

Anna-Lena Olofsson

This is the story about a Virtual Patient called Ana-Lena Olofsson. The case describes a 15 month old girl with a history of loose stools and failure to thrive. As the case progresses you are able to determine a provisional diagnosis based on the history and examination findings. You have to decide on some initial investigations and interpret the results appropriately. By proceeding to specialist investigations you are able to confirm the diagnosis and then formulate a management plan.

Antibiotics

A quick guide to how antibiotics work and common clinical uses, and a bit about adverse effects that may limit their use.

Asthma in Adults

Diagnosis and management of asthma. Review of SIGN guidelines.

Atrial Fibrillation

A quick guide to the diagnosis and treatment of atrial fibrillation.

Back Anatomy

This topic starts with an overview of the back, including the abdominal wall. The topic then explores some of the anatomical structures of the back, including the vertebral column, the cervical vertebrae, the thoracic vertebrae, the lumbar vertebrae and the intervertebral discs. Each of the structures is accompanied by illustrations.

Basic Cardiovascular Examination

Basic cardiovascular examination of a male patient. Includes visual and physical assessment of the patient.

Basics of DNA

Animated examples of the techniques developed for detecting, copying, and sequencing DNA.

The Biology of Pain

A visual representation of the anatomy and physiology of pain which includes editable links to online resources.

Bleeding in Early Pregnancy

1 in 4 women will experience an episode of bleeding during pregnancy. We look at the differential diagnosis in this situation, with a particular focus on the different types of miscarriage.

Blood Vessel Anatomy

This topic begins with a brief introduction to the vascular system and its components (arteries, veins and capillaries). Schematic diagrams illustrate the principal arteries and veins of the body and lower limbs. A diagram illustrating the different layers of blood vessels is shown with supporting text. The last page of the topic describes the structure of capillaries and is supported by a clear diagram.

Blood Vessel Anatomy

This topic begins with a brief introduction to the vascular system and its components (arteries, veins and capillaries). An overall schematic diagram illustrates the position of the components in relation to the heart. Layers of the components are described in more detail (e.g. collagen fibres; smooth muscles) and are accompanied by diagrams. The control of blood flow is described; emphasis is on sphincters and shunt vessels.

Bone Structure and Function

This topic begins with an introduction to the primary functions of bone. A labelled diagram of the femur bone and bone matrix is included. The different types of osteoprogenitor cells are described (e.g. osteoclasts) and an Electron Microscope (EM) image is shown.

Bone Structure and Function

This topic begins with the primary functions of bone and explores its structure in detail, showcasing anatomical images of the femur as an example. A diagrammatical overview of a bone cross-section is shown and bone structure is further explored by describing the bone matrix and its composition in detail along with its various functions. The different types of bone cells and their relevant functions are highlighted with

diagrams and an electron micrograph (osteoprogenitors, osteoblasts and osteocytes). This topic also includes a brief overview of the fracture healing process.

Bronchiolitis

Bronchiolitis is a common paediatric condition. This podcast will tell you about causes, pathophysiology, clinical features, diagnosis, investigations and management.

Calculate Molar Absorbance - Practice Test

This object helps you to be able to convert units from mM^{-1} to M^{-1}

Calculate Molar Absorbance Coefficient

This object helps you to be able to convert units from mM^{-1} to M^{-1}

Calculate the Concentration of a Substance

A pdf document on calculating the concentration of a substance in a mixture.

Calculating Medicines for Children

This learning resource is aimed at providing examples of how to calculate medicines, specifically for children but it relates well to any aspect of calculating medicines.

Cardiology Examination - Auscultation

1. Listen with the diaphragm at the right and then left 2nd interspace near the sternum (aortic and pulmonary areas).
2. Listen with the diaphragm at the left 3rd, 4th, and 5th interspaces near the sternum (tricuspid area).
3. Listen with the diaphragm at the apex (PMI) (mitral area).
4. Listen with the bell at the apex.
5. Listen with the bell at the left 4th and 5th interspace near the sternum.
6. Have the patient roll on their left side. Listen with the bell at the apex. This position brings out S3 and mitral murmurs.
7. Have the patient sit up, lean forward, and hold their breath in exhalation. Listen with the diaphragm at the left 3rd and 4th interspace near the sternum. This position brings out aortic murmurs.
8. Record S1, S2, (S3), (S4), as well as the grade and configuration of any murmurs.

Cardiology Examination - Auscultation for Bruits

If the patient is middle-aged or elderly, you should auscultate for bruits. A bruit is often, but not always, a sign of arterial narrowing and risk of a stroke. - Place the bell of the stethoscope over each carotid artery in turn. You may use the diaphragm if the patient's neck is highly contoured. - Ask the patient to stop breathing for a moment. - Listen for a blowing or rushing sound-a bruit. Do not be confused by heart sounds or murmurs transmitted from the chest.

Cardiology Examination - Carotid Pulse

Examine the carotid pulse. 1. Observe for carotid pulsations. 2. Place your fingers behind the patient's neck and compress the carotid artery on one side with your thumb at or below the level of the cricoid cartilage. Press firmly but not to the point of discomfort. Avoid compressing both sides at the same time. This could cut off the blood supply to the brain and cause syncope. Avoid compressing the carotid sinus higher up in the neck. This could lead to bradycardia and depressed blood pressure. 3. Assess the following: • The amplitude of the pulse • The contour of the pulse wave - is it slow rising? • Variations in amplitude from beat to beat or with respiration. 4. Repeat on the opposite side.

Cardiology Examination - Examination of the Hands

Look at the hands to see if there is evidence of: - clubbing - cyanosis: are hands cold or warm? - stigmata of endocarditis - splinter haemorrhages - Osler's nodes - Janeway lesions - nicotine stains - capillary refill time

Cardiology Examination - Examine the JVP

1. Position the patient supine with the head of the table elevated 45 degrees. 2. Use tangential, side lighting to observe for venous pulsations in the neck. 3. Look for a rapid, double (sometimes triple) wave with each heart beat. Use light pressure just above the sternal end of the clavicle to eliminate the pulsations and rule out a carotid origin. 4. Adjust the angle of table elevation to bring out the venous pulsation. 5. Identify the highest point of pulsation. Using a horizontal line from this point, measure vertically from the sternal angle. The sternal angle is about 5 cm above the right atrium. 6. This measurement should be less than 4 cm in a normal healthy adult.

Cardiology Examination - Patient Introduction

Patient Introduction - Introduce yourself and ask for permission to examine the patient. - Ensure the patient is in a warm environment. - Expose patient adequately, preserving dignity. - General inspection for distress. - Observe particularly for malar flush.

Cardiology Examination - Praecordial Movement

Carefully examine the praecordial movement. 1. Position the patient supine with the head of the table slightly elevated. 2. Inspect for precordial movement. Tangential lighting will make movements more visible. 3. Palpate for precordial activity in general. You may feel "extras" such as thrills or exaggerated ventricular impulses. 4. Palpate for the point of maximal impulse (PMI or apical pulse). It is normally located in the 4th or 5th intercostal space just medial to the midclavicular line. 5. Note the location, size, and quality of the impulse.

Catalyst for Change: A good death

A series of video clips which examines people's reactions to terminal illness and how they have prepared themselves for death. > How can we better informed about the physical processes of death and how we can prepare for that? > End of life care pathways. Recent reports have suggested the need for: > Department of Health End of Life care strategy > High Quality care for all NHS Next Stage Review Final Report (Darzil) Section 1 - Preparing to talk about death Section 2 - Choosing where to die Section 3 - A Good Death

Catalyst for Change: Deliver us from Dementia

This collection of video clips looks at how people affected by dementia cope with caring for those affected by the disease.

Catalyst for Change: Depression in long-term conditions

Series of video clips which looks at patient responses to how their conditions have have fuelled depression and personal anxieties.

Catherine Miller (eViP Virtual Patient)

This is the story about a Virtual Patient called Catherine Miller. She is a 5 month old girl who is brought into the Emergency Department by her Father with a high temperature. As you progress through the case you

have to interpret the examination findings and then investigations to reach a diagnosis and then formulate a management plan. The potential long term complications of the diagnosis are also discussed.

Cervical Cancer

An overview of cervical cancer including aetiology, screening, investigation and treatment.

The Child with Diarrhoea

The child with diarrhoea is a common paediatric presentation. This podcast will outline the important causes, investigations and management of children presenting with acute and chronic diarrhoea.

Chlamydia Trachomatis

The diagnosis and management of Chlamydia which occurs in 10% of under 25 year olds.

Chronic Obstructive Pulmonary Disease

This topic describes Chronic Obstructive Pulmonary Disease (COPD) in detail with different examples including chronic bronchitis and emphysema. The role of smoking is also discussed in relation to the disease. The pathophysiology of, pathogenesis of and complications arising from COPD are covered. The topic concludes with the clinical features of COPD and a list of the different investigation techniques used in diagnosing COPD.

Clinical Demonstration of Internal Pelvic Examination

Clinical Utility

This learning object covers the topic of clinical utility of genetic information. The object focuses on genetic information associated with colorectal cancer.

Cranial Nerves

This topic starts with an overview of the 12 cranial nerves, accompanied by a specimen of the brain overlaid with an anatomical drawing illustrating the precise positions of the nerves. An interactive animation then allows the user to explore the structure and function of each of the

cranial nerves in detail. Each cranial nerve description is supplemented with an anatomical drawing and a gross image of the relevant area.

Cystic Fibrosis

This topic has a thorough introduction relating the disease to the underlying genetic causes. An interactive element gives information about the effects of cystic fibrosis on different organs of the body. A range of diagnoses and treatment methods are described. Psychosocial effects are detailed. The topic concludes with a page summarising care and management.

Determining the importance of clinical trial results

This learning resource demonstrates how to interpret and use clinical trial data (ARR, RRR, NNT, NNH, and confidence intervals) in practice.

Diabetes Type 2

Diabetes type 2 occurs when the body does not produce enough insulin or the insulin produced does not work properly (insulin resistance). We interviewed 40 people about their experiences of diabetes type 2.

Diabetes, a life sentence?

This film features a short collection of video clips of patients talking about their experiences of living and coping with Type 2 Diabetes. The film has three sections: > Patients reactions to the diagnosis > Talking about eating and diet > Coping with complications

Down's Syndrome

This topic describes the main features of Down's syndrome and is accompanied by photographs highlighting dysmorphic features. Graphical and tabular information illustrate the intellectual capacity, life expectancy, functional ability and social independence, and medical checks of those with Down's syndrome.

DVT and PE

A guide to the diagnosis and management of deep vein thrombosis and pulmonary embolism, with particular attention to the correct use of d-dimer tests.

Factors Affecting Wound Healing

This topic describes in detail the various factors affecting the wound healing process using rollover animations. The intrinsic, extrinsic, psychological and social factors affecting wound healing are illustrated in detail with a number of examples.

Female Reproductive Tract

This topic is introduced by describing the functions of the organs of the female reproductive tract. Development of the follicle and corpus luteum are described. The topic finishes by describing the four phases of the menstrual cycle (proliferative, ovulation, secretory, menstrual) and the hormones involved.

Florian (eViP Virtual Patient)

This is a story of a Virtual Patient called Florian. He is a baby born prematurely at 34 weeks gestation and you are responsible for his management at delivery and beyond as you progress through the case. Your decisions will determine the outcome and you will need to make a diagnosis and decide on management including ventilation of the baby and associated complications.

Foetal Circulation

This topic focuses on the direction of blood flow in the organs associated with foetal development. It is supported by a diagram summarising the direction of blood flow in the vital organs.

Fractures

A quick guide to describing fractures, how bones heal, how we manage fractures and what complications may arise.

The Full Blood Count

A haematology resource used for Year 3 undergraduate medicine. Curriculum dependencies of taking a blood sample and types of blood cells and their functions.

Gallstones

A look at how gallstone disease may present, how to investigate a patient, what is involved in a laparoscopic cholecystectomy and a little about post-operative care and possible complications.

GI Tract

This topic has a thorough introduction to the whole gastro-intestinal tract. An animation illustrates the pathway taken by food as it travels through the digestive system. Peristalsis is illustrated using an animation. Students can test their knowledge of the components of the GI tract with a show/hide feature. The topic finishes with an overview of the gastric juices involved in the GI tract.

Gut Functions and Control

This topic begins with an interactive animation detailing the anatomy of the digestive tract. The general structure of the gastrointestinal (GI) tract is described and supported by a diagram showing the layers of the tract wall. Another animation demonstrating peristalsis is included and the three phases of swallowing are described.

Haemagglutination-inhibition Assay

Animated tutorial on haemagglutination-inhibition assay for the presence of specific antiviral antibody in serum. Audio commentary.

Hand Washing

This topic starts with a description about the importance of handwashing in the prevention of spread of infection in a hospital environment. A step-by-step guide of how to wash your hands properly, comprising of washing, drying and moisturising, is also included. Three microbiological demonstrations comparing before and after handwashing specimens are illustrated on agar plates to reinforce the importance of handwashing.

Health Beliefs

Series of video clips which looks at the personal beliefs and experiences of patients with various conditions, including > Bipolar disorder > Dementia > Rapid onset Rheumatoid Arthritis > Asperger's Syndrome > Parkinson's disease > Lactose intolerance > MMR vaccination > Epilepsy > Breast cancer

Heart Anatomy

This topic consists of a labelled diagram showing the gross anatomy of the heart. It also explores the heart anatomy in more detail with an annotated diagram showing a cross-section through the heart.

Heart Anatomy

This topic contains a labelled photograph and diagram of the heart. An introduction to the cardiac cycle is given: the heart is briefly described as having four chambers, and the blood-flow within them is described (e.g. if it is oxygenated or deoxygenated). An animation illustrates the direction of blood flow during the cardiac cycle.

Heart Failure

In heart failure the heart cannot pump enough blood to meet the body's needs. We interviewed 42 people about their experiences of this condition.

Heart Failure: 3 case studies

This collection of video clips follows some real patients on their journeys through heart failure. The film shows how each patient experiences heart failure and how they respond to the condition. The film has three aims:

- > Aspects of heart failure can cause confusion and misunderstanding
- > Heart failure can affect many aspects of a patient's life
- > How can practice nurses ensure that patients are well supported.

Heart Structure

This topic describes the components of the conducting system of the heart and their individual roles. An image illustrates the overall process and shows their relative locations. The topic concludes with a schematic diagram illustrating the direction of blood flow and whether it is oxygenated or de-oxygenated.

History Taking (Phase One: Initiating the Session)

Initiating the Session: This video clip illustrates the beginning of the clinical interview. The objectives of this phase include establishing initial rapport with the patient and identifying the reason for the consultation.

History Taking (Phase Two: Gathering Information)

Communication Skills On-Line is part of Clinical Skills Online and was created to provide an example of a consultation demonstrating some of the objectives and skills included in the Calgary-Cambridge Guide (Silverman J, Kurtz S, Draper J. Skills for Communicating with Patients. 2005. Radcliffe Medical Press: Oxford). The video clips illustrate the different phases of a clinical interview. This consultation takes place in a hospital outpatient clinic. Exploring the patient's problems: This video clip illustrates the first part of the clinical history as the doctor gathers information and explores the patient's problems and the impact on his life.

Hyperemesis Gravidarum

A guide to the diagnosis and management of hyperemesis gravidarum.

iCase Influenza Outbreak Documents

Supporting documents to accompany Influenza Outbreak: protocols, analysis planner, memo, outbreak reports.

Identifying Specific Genetic Variants Related to Disease Susceptibility

This learning resource looks at linkage and gene-disease association studies to assess their usefulness in explaining why certain people suffer specific diseases and others do not.

Infective Endocarditis

The aetiology, diagnosis and management of this often sub clinical disease

Inflammatory Bowel Disease

A focus on presentation, complications and differential diagnosis of inflammatory bowel disease. How to differentiate between Ulcerative Colitis and Crohn's disease.

Informed Consent

This learning resource explains why consent is required in a treatment setting. It describes levels of consent, the need for informed consent and the history of informed consent.

International Classification of Function, Disability and Health

This package was originally designed for undergraduates in Medicine at the University of Nottingham. It will also be useful to students in nursing, allied health professions and pharmacy. Practitioners in these fields, who are new to the ICF, will also find it a useful introduction. It describes the International Classification of Functioning, Disability and Health (ICF), a classification system published by the World Health Organisation to describe health status. This system is widely used in rehabilitation research and practice to describe impairments of body structure and function and how these impact on activities and participation. By the end of this package you should be able to: - List and describe the five domains of the ICF. - Apply the ICF to real-life patient scenarios in order to understand your patient's health status.

Issues with re-using medical images in UK HE settings: an OER view

John M (eViP Virtual Patient)

This is the story about a Virtual Patient called John M. He is a little boy who is nearly 3 years old and is brought into Paediatric A&E with bruises. As the case progresses you have to decide on the important aspects of the history and then proceed to investigations in order to make a diagnosis. Depending on your management you have to deal with some associated medical complications.

Kidneys and the Urinary System

This topic begins with a diagram showing the position of the kidneys in relation to the other surrounding organs. The organs of the urinary system are detailed. Organs associated with the male and female bladder are mentioned and a diagram is included for each system.

Liver Structure and Function

This topic has labelled diagrams of the liver (posterior and anterior view). In addition, a table summarises the functions of the liver.

Lymphoid System

This topic is introduced by a brief description of the functions of the lymphatic system. A description of the primary and secondary lymphoid organs and their locations. An interactive feature illustrating both primary and secondary organs.

Making Solutions: g/1% w/v

A learning resource that describes how to make solutions and how to differentiate between amount and concentration.

Male Reproductive Tract

This topic focuses on the male reproductive tract, including a section through the testis. It also includes the structure and function of sperm.

Malignant Cord Compression and Hypercalcaemia

A guide to the diagnosis and management of 2 oncological emergencies - malignant cord compression and hypercalcaemia.

Meningitis

An overview of meningitis, mainly focussing on adults with bacterial meningitis.

Menstrual Disorders

Clinical presentation and management of heavy periods.

Mental Health: Alcohol and Addiction

Many people use alcohol and illicit drugs. For some it becomes such a serious problem such that they may seek help for it directly. However, the majority of people who harmfully use alcohol and illicit drugs will present to their doctor with other health problems. These may be caused by their substance use or unrelated to them. In either case it is vital to understand the effect that alcohol and other substances will have on the management of the underlying condition. This is why it is important to have a clear understanding of what causes people to misuse substances, what can be done to help them, and how addiction to a particular substance differs from normal experience. This module will focus on the

two substances which cause the greatest challenges for patients and the health professionals involved in their care: Alcohol and Opiates.

Mental Health: Anxiety

It is normal for people to feel anxious from time to time in everyday life. It is also quite common for people with other mental illnesses to experience anxiety as an additional symptom. This is why it is important to have a clear understanding of what the Anxiety Disorders are, and how they differ from normal experience as well as from other disorders. This module will focus on the 3 most prevalent Anxiety Disorders: Generalised Anxiety Disorder, Phobic Disorders and Panic Disorder.

Mental Health: Bipolar

People with Bipolar Disorder (also known as Manic Depression) experience episodes of high and low mood which disrupt their day-to-day life. The pattern of illness is different in each case; people may experience far more episodes of one mood extreme than the other, while the frequency of episodes is also very variable. Even though this is an episodic illness in which people get better between episodes, research is starting to show that sufferers continue to have difficulties when in remission. The chronically disabling nature of the illness, together with the frequent difficulty in establishing the diagnosis at the outset, means that doctors must have a clear understanding of how to recognise and treat it.

Mental Health: Delirium

Delirium is defined as a transient, usually reversible, cause of cerebral dysfunction. The clinical hallmarks are decreased attention span and a waxing and waning type of confusion. Delirium is one of the most frequently overlooked diagnoses in general hospital settings. It is almost always due to physical pathology, but often presents with psychiatric symptoms. Every doctor, whatever their specialty, should know how to recognise and manage this common syndrome.

Mental Health: Dementia

Dementia is one of the biggest health problems facing developed and developing countries. In the UK 700,000 people have dementia, with one new case every 3 minutes, a figure that is forecast to double within a generation. Currently, 42% of the UK population, know a close friend or family member with the condition and its financial costs alone, of

over £17billion per year, are more than cancer; heart disease and stroke combined.

Mental Health: Depression

Clinical depression is a serious illness which leads to persistent low mood, loss of energy and motivation, and a reduced ability to feel pleasure. It interferes with day-to-day life by producing negative thoughts and a variety of physical symptoms. Indeed physical symptoms are so important that it is more usual for patients with depression to go to their doctor with a bodily complaint than with a complaint about their mood, so it is vital that doctors understand that depression may be a “hidden” part of the picture. According to the WHO Global Burden of Disease study (2000), Depression is the 4th leading cause of disease burden, and is in fact the world's greatest cause of disability. This means that every doctor, in every specialty, will need a basic understanding of the disease and its evolving treatment. Depression also commonly occurs in association with physical illnesses such as heart disease, diabetes, cancer and stroke, and may actually play a part in increasing the risk of some of these diseases.

Mental Health: Schizophrenia

The term, schizophrenia, covers a broad group of disorders which affect the beliefs people have about the world around them. This results in disruption to their day-to-day lives and usually causes distress to them and also their families and friends. They may hear voices speaking when no-one is talking or believe that others are against them when this doesn't seem to be true: 'positive symptoms' refer to such hallucinations and delusions, 'negative symptoms' include amotivation and social withdrawal and there can also be disorganised communication. Successful treatments include antipsychotic medications, social interventions and family and cognitive behaviour therapy.

Mental Health: Violence and Safety

The vast majority of people with mental illness are not violent. However, violent incidents do occur for a variety of reasons in psychiatric hospitals as well as in general hospitals. It is therefore important for all doctors to be familiar with the reasons why their patients may become violent. We need to know how to prevent incidents from occurring - and when prevention fails, we need to know how to manage violent patients safely and effectively.

Moral Theories

This learning object describes the moral theories that are used to justify or clarify health care professionals' clinical decisions.

Mr Angermeier

This is the story about a Virtual Patient called Mr Angermeier. The case describes a 48 year old man presenting to A+E with chest pain. As the case progresses, you go through differential diagnosis as well as different management options for acute myocardial infarction. You have to decide on some initial investigations and interpret the results appropriately. The case goes through interpretation of investigations as well as indications and contraindications for each treatment modality. Prior to discharge, the patient develops shock, you will have to differentiate its type and formulate a management plan.

Muscle Joints

This topic begins with a good introduction to the different types of joints (fibrous, cartilaginous and synovial) and each is described in more detail. A table gives a comparison between joint types and modern everyday items for the students to relate to (e.g. a hinge and the elbow joint). The next part of this topic describes the muscular system and gives a brief introduction to the axial and appendicular muscular system. The three types of muscle tissue are also described.

Muscle Structure, Innervation and Contraction for Medical Students

This topic starts with an overview of skeletal muscle structure. The process of muscle innervation and contraction is shown and the importance of the sarcomere, myosin, actin and crossbridge cycling is discussed, with the aid of animations. An overview of the motor unit is illustrated and further expands to cover the branching of motor neurons, motor end plates and neuromuscular junctions (NMJs).

Muscles

This topic starts with a basic introduction to muscles and an image illustrating the possible locations of the different muscle tissues. The three types of muscle tissue are described in more detail. Along with the features of muscle tissue (e.g. contractibility), the functions of these tissues (e.g. support) are discussed.

Musculoskeletal System

This topic starts with a description of the main functions of bone (e.g. surface for attachment). Bone composition and endochondral ossification is described and a diagram showing the stages is given. The different types of bones (e.g. short, flat) and the structure of long bones are detailed further. Diagrams showing the different regions of the spine are included. Bone modelling and remodelling are described.

Myocardial Infarction

The aetiology, diagnosis, investigation and management of MIs. The important facts for your FY1 years!

Numbers Needed to Treat, Numbers Needed to Harm

This learning resource considers how to measure and interpret the magnitude of effect in clinical trial results using number needed to treat (NNT) and number needed to harm (NNH).

Nutrition and Absorption

This topic focuses on three molecules: carbohydrates, proteins and fats. Their chemical structures are also provided. The different forms of carbohydrates are introduced (e.g. mono-, di-, polysaccharides). The roles of the molecules in the diet and their digestion are discussed.

Obesity

This topic gives a brief introduction to obesity and an introduction to its genetic link. There is an interactive calculator allowing students to calculate their Body Mass Index to categorise their weight status (e.g. overweight, underweight, etc.).

Oga

This is the story of a Virtual Patient called Oga. She is a 3 year girl originally from Turkey who presents with a history of chronic cough to your respiratory clinic. As you proceed through the case you are able to evaluate the important aspects of the history and clinical examination. By interpreting specialist investigations you are able to make a diagnosis and formulate a management plan as well as managing some complications.

The Open Dementia E-learning Programme: Living with dementia

This module asks users to see each person with dementia as a unique individual and reinforces the importance of knowing their background and life history. Through audio and video the module explores the abilities people with a dementia retain in spite of the difficulties they face, how dementia impacts on families, friends and community and the support that is needed.

Pancreas Structure and Function

This topic starts with a labelled diagram, showing the position of the pancreas in relation to the jejunum and small intestine. A table clearly differentiates the pancreas as an exocrine and endocrine gland.

Parkinson's Disease

Parkinson's Disease is a common movement disorder affecting 1-2% of the elderly population. We discuss the features, diagnosis and treatment of this neurological condition.

Pelvic Organ Prolapse

Pelvic Organ Prolapse is the downward descent of the pelvic organs in a woman, leading to the protrusion of vaginal walls and uterus itself.

Penetrance

This learning resource covers the subject of Penetrance - the probability of a person carrying a disease-associated genotype developing that disease within a given time frame.

Peptic Ulcer Disease

The diagnosis and management of peptic ulcer disease (PUD) including the common presenting problems to GPs.

Pharmacogenomics

This learning resource introduces Pharmacogenomics - the study of genetic influences on an individual's response to drugs.

Physiology of the Respiratory System

This topic begins with a good introduction to the respiratory system and how it can be categorised (e.g. structurally or functionally). A diagram illustrates the relative pressure differences of the alveoli and atmospheric air. A description of gaseous exchange is also given.

Practice test - calculating the concentration of a substance in a mixture

A 10 question test on calculating the concentration of a substance in a mixture

Psychiatry Teaching Resource

Renal Function Diuretics

This topic describes the various drugs that affect renal function and introduces diuretics. Diuretics are explored in more detail, specifically the mechanism of action and the different types, including examples.

Renal Structure and Function

This topic begins with an introduction to the nephron unit and a diagram supports the text. An interactive diagram showing the components of the nephron is included. The physiology of micturation is described and a diagram summarises this process.

Research Skills for BioMedicine

Schizophrenia

First of a two part look at schizophrenia. Covering the diagnosis, causes and pathological changes of the disease, then a quick guide to treatment and side effects of the medications.

Stomach

This topic begins with a description of the structure and function of the stomach and is accompanied with a labelled diagram. A table summarising the digestive enzymes of the stomach is included.

Streptococcus

This podcast will review the way in which streptococci are classified and highlight the clinical importances of different streps.

Structure and Function of the Large Intestine (medical students)

This topic begins with a diagrammatic overview of the gastrointestinal (GI) tract with particular relevance to the structure and function of the large intestine. The topic then breaks down into the structure and function of the various parts of the large intestine, including the appendix, caecum, colon (ascending, descending, transverse and sigmoid), rectum and anal canal. The descriptions for each of the above parts are accompanied by diagrams and histological images.

Structure and Function of the Large Intestine (nursing students)

This topic describes the structure and function of the various parts of the large intestine, including the appendix, caecum, colon (ascending, descending, transverse and sigmoid), rectum and anal canal. The descriptions for each of the above parts are accompanied by diagrams.

Surrogate Outcomes

This learning resource considers the type of evidence which should be used when making decisions about patient care.

Taking a Sexual History

Sexual activity is a health behaviour and therefore it is important that doctors are able to gather information about sex confidently and competently. In this consultation, the patient presents to his GP with a worry that he may have contracted a sexually transmitted disease. It is important for the GP to enquire about the patient's risk factors in a sensitive and non-judgmental way. The GP needs to gather information about the patient's sexual activity and work with the patient to negotiate a plan.

Talk on Confidence Intervals

PowerPoint slides for Confidence Intervals. Examples are taken from the Medical Literature.

Thyroid Dysfunction

Clinical features, investigations and management of hypo- and hyperthyroidism.

Thyroid Examination

This procedural skills video shows a thyroid gland examination being undertaken by Dr Michelle Downie from St George's, University of London. The content of this video is licensed by the Creative Commons and anyone is free to use this video for educational, personal, and non-commercial purposes only.

Tuberculosis

Essential reading for those planning on working abroad, as global numbers of TB patients increases.

Understanding and Classifying a Stroke

Stroke is the third largest cause of death in the UK after heart disease and cancer. It is also the single leading cause of severe disability in the UK. Classification of stroke is crucial in planning treatment and is a good indication of prognosis This Learning Object helps individuals understand how to make the diagnosis of stroke using the Oxford Stroke classification. It is suitable for any health care professionals involved in the management of stroke but especially doctors and medical students OBJECTIVES: * To develop an understanding of the different symptoms and signs seen in stroke * To be able to classify the type of stroke using the Oxford Stroke classification * To relate the clinical diagnosis to the likely anatomical lesion and pathology * To understand the importance of the clinical classification in estimating prognosis Please note that all persons were filmed with their consent.

Upper Respiratory System

This topic begins by categorising the respiratory system into the upper and lower parts. Each part is further described. Diagrams illustrating the external and internal nose are included. The nasal cavity is described as being divided into two parts and the components of each part (the roof, floor and the lateral and medial wall) is described. The topic concludes with a diagram and description of the tracheobronchial tree.

Using Spectrophotometry

This learning object covers how to determine the concentration of a substance in a mixture.

Using Twin & Adoption Studies

This learning object looks at the use and effectiveness of twin and adoption studies to enrich our understanding of the contribution of genetics and environmental factors in disease causation.

Venepuncture Explained by Dominic Egan Faculty of Health

Virtual Genetics Education Centre

The VGEC is a hub of evaluated genetics-related resources for teachers in higher education and in schools and colleges, health professionals and the general public. It covers all aspects of genetics, including, for example: * Information about DNA suitable for schools and colleges, higher education, the general public as well as health professionals * Simple experiments suitable for all ages * Tutorial information * Videos on useful techniques * Current and relevant links to other evaluated resources

Virtual Pain Manager (VPM)

The Virtual Pain Manager (VPM) is a simulation of a patient control analgesia (PCA) machine, and teaches both the use of the machine and the provision of associated nursing care in a hospital setting. Naturally, student nurses cannot be allowed free rein of real patients as the risks are too great. They cannot be allowed to make mistakes with the health of real people. However, in the virtual world they are free to make mistakes and—crucially—learn from them in an environment in which no harm can be done. There is great value in being able to learn from your mistakes, and often more may be learnt from understanding an error than through success. Scenario VPM allows student nurses to experience a clinical situation which in real life they would not be able to undertake: managing acute pain in a postoperative surgical setting. VPM is designed to follow lectures on the theory of pain management. In the simulation, students adopt the role of a nurse who has been assigned to a patient who is in pain, having returned from an operating theatre. It is the nurses' responsibility to reduce the pain to an acceptable level and keep the pain level controlled, so that the PCA unit can be withdrawn and the patient

given oral analgesia instead. Complications such as chest infections, DVT, pneumonia and respiratory arrest can occur as result of poor patient care, sometimes with fatal results. The occurrence of complications represents failure for the user, with feedback given regarding the nature of the complication and the consequences for both patient and nurse. Success is judged on achieving the conditions for withdrawal of the PCA unit: pain is at a comfortable level; pain is stabilised; and the patient is not requesting doses of analgesia from the PCA unit. Ideally, the nurse should establish these conditions within 48 (simulated) hours to succeed. If this situation has not been reached within 72 (simulated) hours, the simulation terminates and the student is judged to have failed in the care of the patient. The virtual world Behind the scenes of VPM is a robust model of interactions between human organs, pain, pharmaceuticals and psychology. The model has been developed with great care and accuracy to replicate the processes at work in the human body. Where real-world calculations and data exist for these interactions they have been employed within the model. VPM has even prompted questions for further research, such as an investigation into the psychology of the use of the PCA unit. Delivering such complex learning in an engaging manner would be unachievable without a high fidelity, interactive simulation such as VPM. As there was no empirical model as a basis for the simulation, the academic on this project, Gareth Parsons, used his considerable knowledge and experience to develop an appropriate model. The learning experience In using a computer-based learning package, student nurses can replay the VPM simulation time after time, varying their strategy, analysing the strengths and weakness of different approaches and developing best practice. As they do so, the student nurses become increasingly engaged in the simulation and the care of their patient: "The first time my patient died and the second he was fine felt bad the first time, like I had failed I would have carried on repeating it until I had a survivor lol" The comments we have received from student nurses (and qualified nurses who have tested VPM) has been very positive: "... enables us to assess our abilities within an environment which is safe to do so, is good for our confidence and may identify areas in which we need to develop better skills." "I think it is great... it helps us put the theory we learn into practice in a safe way." "I think its a great way to practice without pressure." "I think that this is an excellent way of learning. Espically when getting to grips with controlled drugs, such as morphine." These responses indicate that student nurses have been able to take their theoretical knowledge and put it into practice. VPM can therefore be said to provide an effective arena in which students can learn about the PCA unit and pain management. The learning benefits VPM has been designed from the beginning to have a highly reusable pedagogical approach. While the logic of the model in VPM is contained with the application, most of the variables are stored outside in an XML file. This

file can contain multiple patient scenarios, which can be configured for differing levels of difficulty. Where multiple patient scenarios exist, VPM randomly selects a patient at the start of the simulation. Within each scenario the model itself applies variance to certain variables. By introducing this random element, student nurses are prevented from learning how to 'play' the simulation and are encouraged to apply their learning and knowledge as they would in real life. The random nature of VPM's scenarios also provides a more realistic situation, as patients—even those presenting with the same symptoms—will respond to treatment differently depending on their physiology and psychology. VPM provides student nurses with an experience that would otherwise be unavailable to them, and challenges them to put their theoretical knowledge into practice in a safe environment where they can learn from their mistakes and develop their professional skills.

Will I need an operation?

Reactions to the diagnosis of a long-term condition. Many people go to the doctor not knowing in advance that they have symptoms of a long-term health condition. Most people probably couldn't name more than one or two long-term conditions. And yet people with conditions like Type 2 Diabetes, Cardiac Disease and Rheumatoid Arthritis make up a large part of primary care work. You may understand what the long-term condition is medically, but do you really understand how shocked people can feel when they find out that something is wrong?

Further Education Open Educational Resources

(<http://open.jorum.ac.uk/xmlui/handle/123456789/1>)

Health Care / Medicine / Health & Safety

(<http://open.jorum.ac.uk/xmlui/handle/123456789/13>)

The Virtual Community of Bradton

The 'Bradton' project has engaged service users and carers in the collaborative production of web based learning materials. Individual narratives relating to personal experiences of health and social care have been used to inform the development of media rich scenarios that are sited in a virtual community 'Bradton'. This innovative project has created an inter-professional learning and teaching resource, and a tangible means of engaging with service users. There has been widespread interest in the use of the materials for pre and post registration healthcare

education, subsequent to dissemination of the work locally, nationally and internationally.

The Biology of Pain

A visual representation of the anatomy and physiology of pain which includes editable links to online resources.