

ANNUAL PRIMARY CARE CONFERENCE & EXHIBITION

MDDUS



Clinical Learning [A2]

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We do not have any financial interest(s) or relationship(s) to disclose with regard to the subject matter of this presentation.



Essential Knowledge Updates www.elearning.rcgp.org.uk

RCGP Annual Conference 2017

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Introduction

- Introduction and example questions
- Chronic obstructive pulmonary disease
- Actinic keratosis & Contact dermatitis
- National Clinical Guideline for Stroke
- EKU Hot Topics
- Managing common infections
- Non-alcoholic fatty liver disease
- Questions and answers

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Continuous professional development for primary care physicians – Why?

- Patients expect rightly expect highest degree of professionalism
- Doctors need to balance traditional values and latest scientific expertise
- Need to respond to educational needs that arise during patient contact and continuously being up to date on the ever shifting evidence base around diagnostic and therapeutic methods
- Particularly difficult for general practitioners (GPs)
- Newly qualified doctors' knowledge not enough to last a life time



Estimated time for doubling of medical knowledge in years





CPD in the good old days



Seminars

- Problem based small group learning
- Journals
- Textbooks
- Conferences
- Journal Clubs



eLearning doesn't have to be alone in front of your PC

- Use practice, journal group and faculty meetings to present, share and discuss new learning
- Extend your personal educational network and use Twitter, Facebook Groups and mailing-lists
- Use your smart devices for spontaneous learning (both formal and informal)
- Do you share e-learning resources with your friends and colleagues via social media?





Dr Alys Cole-King @AlysColeKing 6 Sep @WeAHPs Also RCGP suicide prevention elearning rcgp.org.uk/learning/onlin... #WeMDT

▲ ▲ ▲ ▲ 4

Dirk Pilat @Dirkpilat13 MayAnybody have some evidence based guidance on
oral nutrition during viral gastroenteritis in the
elderly? Seems to vast spectrum of opinions.



What's on offer?

- Different e-learning programs for different needs:
 - Essential Learning Updates + Challenges
 - 5 minutes to change your practice
 - 90+ in depth courses covering all curriculum statements
 - GP-Self Test
 - InnovAiT Clinical Scenarios
 - Women's Health Framework







http://elearning.rcgp.org.uk/

Essential Knowledge Challenges

www.rcgp.org.uk/GPSelfTest

www.slido.com

https://www.sli.do





Q1 www.slido.com

Mr G is a 56 year old smoker recently diagnosed with COPD. This was following recurrent chest symptoms. His O2 sats are 96% on air, and a recent CXR was reported as showing changes consistent with COPD. His FEV1 was 63% predicted with a FEV1/FVC ratio of 0.65, and he has already been prescribed salbutamol.

Which is the SINGLE MOST appropriate next step? Select ONE option only.

- A. Prescribe a LAMA
- B. Prescribe carbocysteine
- C. Check symptoms and exacerbation history
- D. Refer for pulmonary rehab
- E. Prescribe LABA/ICS



Q2 www.slido.com

You see Mr G again 18 months later. You congratulate him on stopping smoking. He was started on seretide (LABA/ICS) last year by a colleague. His recent spirometry showed a stable FEV1 61%. He reports no exacerbations in the past year but still has significant respiratory symptoms on assessment.

Which is the SINGLE MOST appropriate INITIAL step? Select ONE option only.

- A. Prescribe a LAMA in addition to LABA/ICS
- B. Continue LABA/ICS
- C. Reduce/stop ICS
- D. Prescribe carbocysteine
- E. Prescribe an antibiotic/steroid rescue pack



Q3 www.slido.com

An 59-year-old Caucasian man with hypertension had an ischaemic stroke six weeks ago. His echocardiogram and renal function are normal. Carotid dopplers showed mild bilateral atherosclerosis. His BP is consistently 148/66 on 10mg amlodipine and 10mg ramipril daily.

Which is the SINGLE MOST appropriate antihypertensive management option? Select ONE option only.

- A. Add doxazosin
- B. Add indapamide
- C. Switch amlodipine to bisoprolol
- D. Switch ramipril to candesartan
- E. No change in medication



Q4 www.slido.com

An elderly temporary resident collapses in the waiting room. He is pale, sweaty and slurring his speech. The practice nurse was about to dress his leg ulcer. His blood pressure is 136/72, p 86 regular, sats 98%. She calls you for help and is concerned he is having a stroke.

Which is the SINGLE MOST appropriate INITIAL management step? Select ONE option only.

- A. Alcohol breath test
- B. Aspirin 300 mg
- C. Blood glucose
- D. Clopidogrel 75 mg
- E. ECG



Q5 www.slido.com

A 45-year-old woman has an abdominal ultrasound scan with an incidental finding of fatty liver.

What is the single best ESTIMATE of her long-term risk of progressive liver disease? Select ONE option only.

- A. 1%
- B. 5%
- C. 10%
- D. 25%
- E. 50%



Q6 www.slido.com

A 54-year-old woman is diagnosed with NAFLD following an ultrasound scan. She is a nonsmoker, drinks about two glasses of wine at the weekend and two cups of coffee daily. Her BMI is 27 kg/m2.

According to current guidance, which is the SINGLE MOST appropriate INITIAL lifestyle modification? Select ONE option only.

- A. Increase exercise
- B. Reduce alcohol
- C. Reduce caffeine
- D. Supplement diet with omega-3 fatty acids
- E. Supplement diet with probiotics



Q7 www.slido.com

A 25 year old female who is 20 weeks pregnant has a confirmed urinary tract infection. Surprisingly, the E.Coli strain that's causing the infection is sensitive to all antibiotics.

What is the most appropriate first line treatment? Select ONE option only.

- A. Cefalexin
- B. Trimethoprim
- C. Nitrofurantoin
- D. Amoxicilin
- E. Pivmecillinam



Q8 www.slido.com

How many patients with contact dermatitis can expect complete resolution of their symptoms? Select ONE option only.

- A. 10%
- B. 25%
- C. 50%
- D. 75%
- E. 90%



Essential Knowledge Update 2017.3

Chronic Obstructive Pulmonary Disease (COPD), GOLD Executive Summary, 2017

Diagnosing COPD

- Cough, dyspnoea, sputum and wheeze are the key symptoms of COPD
- Tobacco smoke is responsible for most COPD, but occupational exposure and infections are responsible for a significant proportion of disease
- COPD should be confirmed by airflow limitation on spirometry (FEV1/FEV ratio <0.7)
- CXR (not useful to establish a diagnosis in COPD) to exclude alternative diagnoses





- Treatment recommendations were made on the basis of severity defined by FEV₁ readings and MRC breathlessness scales. 2010 NICE guidelines are consistent with this
- However, there is a weak correlation between FEV₁, symptoms and health status. So in the 2017 GOLD guidelines the link between FEV₁ and treatment recommendations was broken
- The GOLD assessment guidelines are now based on two criteria:
 - The severity of symptoms (determined by the COPD Assessment Test or similar)
 - Exacerbation history. This is the best predictor of exacerbation risk. ≥ 2 exacerbations in a year or ≥1 exacerbations requiring hospital admission in a year are high risk features
- These two criteria are used to place patients in one of four groups, A-D





- Using the A-D grading system requires an assessment of symptoms
- The old MRC scale only considered breathlessness, whereas the GOLDrecommended scales look at a broader set of symptoms
- The COPD Assessment Test (CAT) is validated in primary care



How is your COPD? Take the COPD Assessment Test (CAT)

This questionnaire will help you and your healthcare professional measure the impact COPD (Chronic Obstructive Pulmonary Disease) is having on your wellbeing and daily life. Your answers and test score, can be used by you and your healthcare professional to help improve the management of your COPD and get the greatest benefit from treatment.

If you wish to complete the questionnaire by hand on paper, <u>please click here</u> and then print the questionnaire. If you complete the questionnaire on-line, for each question below, click your mouse to place a mark (X) in the box that best describes you currently.

Example: I am very happy 0 2 3 4 5 I am sad SCORE I never cough 0 1 2 3 4 5 I cough all the time I have no phlegm (mucus) 0 1 2 3 4 5 My chest is full of phlegm (mucus) My chest is full of phlegm

Figure 3: COPD Assessment Tool. GlaxoSmithKline (GSK), 2016. Reproduced with permission.



COPD Treatment

LAMA

 LAMAs dilate airways by blocking acetylcholine receptors and so reducing bronchoconstriction. The most commonly used example is tiotropium bromide

LABA

 LABAs dilate the airways by relaxing airway muscles. Commonly used examples are salmeterol and formoterol

ICS

- ICS reduce inflammation in the airways, use in asthma is well established as they are effective against eosinophil-related inflammation.
- Their use in COPD is less clear-cut. ICS also increase the risk of pneumonia (NNH 25)



COPD Treatment: Cochrane Review

- 2017 Cochrane review compared LAMA/LABA vs LABA/ICS
- Most of the patients had moderate-severe COPD
- Treatment lasted 6-52 weeks
- Combined treatment with LAMA/LABA appears to be superior to treatment with LABA/ICS in terms of reducing symptoms and reducing exacerbations
- Serious adverse effects and pneumonia were also less common with LAMA/LABA
- There was no difference in death rates
- The authors support the 2017 GOLD guidance that LAMA/LABA is preferred to LABA/ICS
- A large number of low risk COPD patients may be receiving ICS inappropriately





High risk of exacerbations

COPD Treatment

- Patients with Asthma-COPD overlap syndrome and/or high eosinophil count may benefit from LABA/ICS in the first instance
- If exacerbations continue, escalate to LAMA/LABA +ICS or LABA/ICS
- If exacerbations still continue, consider adding a macrolide. Stop the ICS if it hasn't stopped exacerbations due to the risk of pneumonia
- Oral glucocorticoids may be used in exacerbations but should not be used in long term daily treatment
- Mucolytics (e.g. carbocysteine) reduce exacerbations and modestly improve health status in patients not on ICS
- Referral for an oxygen assessment is recommended for patients with oxygen saturations of ≤92%



COPD Value Pyramid



ICS withdrawal



Resources

www.rightbreathe.com

Inhalers Spacers Pathways	About					
Find an inhaler					Figure 7 & 8' Rid	htBreathe
A Pathways	Keyword search	s	earch	Cl	Resources. Repro	duced with
Drug class	Drug name		Device type			
LAMA + LABA	× - Select drug name	¥	Select device typ	De		
Paediatric Asthma Licence	Adolescent Asthma Licence	Adult Asthma Licence		COPD Licence		
Dose counter	Breath activated device			Duaklir 340 / 12 Genuair (AstraZeneca UK Ltd) 6 dose Aclidinium bromide 396micrograms / dose + Formoterol 11.8micrograms / dose		LAMA + LABA Dry powder inhaler (DPI) £32.50 / 30 days (based on 2 puffs / day)
			Ultibro Institution Access	Ultibro Breezhaler 8 with device (Novarti capsule Indacaterol 85micro bromide 54microgra	JItibro Breezhaler 85 / 43 inhalation powder capsules with device (Novartis Pharmaceuticals UK Ltd) 10 capsule ndacaterol 85micrograms / dose + Glycopyrronium promide 54micrograms / dose	
			Liftero Insetur Annual Annual	Ultibro Breezhaler 8 with device (Novart capsule 3 x 10 caps Indacaterol 85micro bromide 54microgra	5 / 43 inhalation powder capsules is Pharmaceuticals UK Ltd) 30 ules ograms / dose + Glycopyrronium ams / dose	LAMA + LABA Dry powder inhaler (DPI) £32.50 / 30 days (based on 1 puffs / day)

Essential Knowledge Update 2017.3

Care of patients with actinic keratosis, British Association of Dermatologists' guidelines, 2017

Actinic Keratosis: Introduction

- Actinic keratoses/solar keratoses = keratotic lesions on chronically lightexposed adult skin, typically face and backs of hands
- Pre-malignant conditions with low potential to develop into non-melanoma skin cancer (NMSC) such as squamous cell carcinoma (SCC)
- Result of chronic exposure to ultraviolet (UV) light predominantly in fair-skinned individuals





Incidence and prevalence

- Incidence of actinic keratoses is underestimated
- Prevalence studies in Galway, South Wales and Merseyside showed 19-24% of individuals age >60 had at least one actinic keratosis
 - 3-6% of men age 40-49 had at least one actinic keratosis
- Linear increase in prevalence of actinic keratosis in men age 60-80 but not in women
- 30% of patients (mean age 61) attending a dermatology clinic in Austria had actinic keratoses
 - By the age of 70, 70% had actinic keratosis mainly head and neck



Grading

- Grade 1 Mild, pink or grey marks with slight scale or gritty to touch
- Grade 2 Moderate, thicker hyperkeratosis and easily detected
- Grade 3 Severe: hypertrophic, thick keratin
- Field Change: areas of skin that have multiple AK associated with a background of erythema, telangiectasia and other changes, more at risk of developing SCC



Figure 9-11: Clinical Grading (according to Olsen 1991) of Actinic (Solar) Keratosis. Primary Care Dermatology Society (<u>www.pcds.org.uk</u>). Reproduced with permission. Grade 1

Grade 2

Grade 3





Actinic Keratoses and Cancer

The evidence for progression to malignancy is not clear

- 25-70% of grade 1 and 2 lesions regress and relapse over a period of about 4 years
- A US study showed 0.6% of patients developed an SCC within the first year rising to 2.57% at 4 years
- The more actinic keratoses a patient has is associated with a higher the overall risk of developing an unrelated SCC
- For an individual with an average of 7.7 actinic keratoses, probability of developing an SCC was estimated approximately 10% over a 10-year period



Ix + Dx

- Diagnosis is primarily made on clinical diagnosis
- Dermoscopy can be used as can tele-dermatology
- Patients with chronic fluctuating disease may learn self diagnosis but need to liaise with a healthcare professional (HCP)
- If there is uncertainty in the diagnosis, a referral for biopsy should be made
- If invasive malignancy is diagnosed, the care should be undertaken by the skin cancer multidisciplinary team
- When diagnosing actinic keratosis, grading, location and thickness should be noted


Therapy

- Emollients +/- urea and salicylic acid
- Sunscreen
- 5-Fluoracil
- Diclofenac Gel
- Topical Retinoids
- Imiquimod
- Cryosurgery



Referral

- If there is diagnostic uncertainty
- Or widespread/ severe lesions
- Immunocompromised patients
- Lesions not responding to treatment in primary care
- Very young patients with AK, consider xeroderma pigmentosum



Essential Knowledge Update 2017.3

Management of contact dermatitis, British Association of Dermatologists' guidelines, 2017

Contact Dermatitis

- Inflammatory reaction in response to external agents
- 4-7% of dermatological consultations
- Prevalence between 10-27%
- Most common allergens:
 - Nickel (14.5%),
 - Fragrance (3.7%)
 - Cobalt (2.2%)
 - Hydroxyisohexyl cyclohexene carboxaldehyde (1.4%)
 - P-phenylenediamine (PPD) (1%)





Types of contact dermatitis

- Acute irritant contact dermatitis: short term inflammatory reaction to a strong irritant or caustic agent
- Chronic irritant contact dermatitis: sustained inflammatory response in response to cumulative exposure to weaker irritants
- Allergic contact dermatitis: sensitisation of the immune system to specific allergens
- Phototoxic contact dermatitis: the allergic response is activated by exposure to UV light
- Systemic contact dermatitis: inflammatory skin response after ingestion of a chemical to which there has been previous sensitisation
- Protein contact dermatitis: a cell medicated immune response to proteins (most commonly foods). Patch testing is negative but skin prick test is positive



Assessment

- Personal history of atopy (hay fever, asthma, eczema)
- Where did the rash begin
- Temporal relationship to skin product use (cosmetics, fragrance, topical therapy)
- Wash products used
- Relationship to work
- Relationship to activity (DIY, recreation, sport)
- Improvements with change in environment
- Effect of sun exposure





Treatment and outcomes

- Avoidance of irritant or allergen
- Avoidance of soap and detergents
- Emollients (up to 500g/week)
- Steroids
 - Brief course of potent steroid, then step down
- Refer for light therapy or systemic treatment if not symptomatically controlled
- Outcomes poor:
 - 25% can expect complete resolution
 - 50% long term intermittent symptoms
 - 25% have long term symptoms



Essential Knowledge Update 2017.2

National Clinical Guideline for Stroke: 5th edition. Intercollegiate Stroke Working Party, 2016

Presented by Dr Chris Elfes. FRCGP

Introduction

- Stroke accounts for 11% of all deaths
- Cerebrovascular disease is the third leading cause of disability in the UK.
- 85% = Ischaemic (thrombus or embolus; rarely traumatic dissection if young)
- A clinical syndrome, of presumed vascular origin, typified by rapidly developing signs of focal or global disturbance of cerebral functions associated with a specific cerebrovascular territory
- Differential diagnosis seizure, sepsis, syncope, vestibular disorder
- Stoke >24 hours, TIA <24 hours



Haemorrhagic stroke

10% Primary intracerebral haemorrhage (ICH) - spontaneous, non-traumatic

- Usually small vessel disease, most commonly hypertensive arteriopathy
- Less commonly arteriovenous malformations and bleeding from a tumour

5% Subarachnoid haemorrhage (SAH) - blood vessels between arachnoid and pia mater.

- 85% from an intracranial aneurysm
- 10% from a non-aneurysmal perimesencephalic haemorrhage
- 5% from other vascular abnormalities

Rapid ND Vomiting Decreased LoC



Diagnosis: FAST test

Reception staff should be trained to recognise people with symptoms indicating an acute stroke as an emergency requiring transfer to a hyperacute stroke centre.

Face, Arm and Speech Test (FAST)

Face – Ask the person to smile. Does one side of the face droop? Arms – Ask the person to raise both arms. Does one arm drift downward? Speech – Ask the person to repeat a simple phrase. Is their speech slurred or strange? Time – If you observe any of these signs, call 999

A few people with symptoms of stroke will have a negative FAST test (e.g. sudden onset visual disturbance, lateralising cerebellar dysfunction).

as their face fallen on

one side?

Can they smile?



(Reference: www.nhs..uk)



Is their

speech slurred?

if you see any single one

of these signs.

Can they raise both

arms and keep

them there?

Acute management

999

If slips through your triage net don't forget blood sugar, NBM

Ischaemic stroke

- Admit
 - For CT within 1 hour, Alteplase within 3 hours
 - ? Embolectomy within 5 hours, ?? Decompressive craniotomy within 48 hours
- 300 mg aspirin within 24 hours for 2 weeks
- +/- PPI
- Clopidgrel second-line if allergy



Acute management

TIA

- 300 mg aspirin for 2 weeks
- Try ensure seen in stroke clinic within 24 hours
- (or within one week if >7 days ago)
- No need ABCD2 risk stratification tool

Haemorrhagic stroke

- Admit
 - For CT, ? LP after 12 hours, surgery
 - If < 6 hours and BP > 150 Rx < 140



Risk of further events

The risk of an imminent stroke if presenting within a week of TIA is:

- 2 4.1% at day 2
- 3.9 6.5% at day 7

The long term risk of further events following an ischaemic stroke or TIA is:

- 26% within 5 years
- 39% by 10 years

Therefore, secondary prevention should be commenced as soon as possible Ensure investigated for the following risk factors:

- Ipsilateral carotid artery stenosis (Endarterectomy within 7 days if 50-99%)
- Atrial fibrillation
- Structural cardiac disease



Long-term management of ischaemic stroke or TIA

- Diet, smoking, exercise, DM control and alcohol intake
- Target systolic BP should be <130 mm Hg:
 - 140–150 mmHg for people with severe bilateral carotid artery stenosis
 - Rx CCB or thiazide +/- ACE or ARB
- Target lipid management should be >40% reduction in non-HDL cholesterol
- Atorvastatin 20 80 mg
 - + Ezetimibe if Familial Hyperlipidaemia
- Antiplatelet treatment (no AF)
 - After initial 2 weeks of aspirin -> Clopidogrel 75 mg daily +/- PPI
 - 2nd line aspirin + dipyridamole
- Anticoagulation (AF, PAF, Flutter with no bleed on scan and BP controlled)
 - Warfarin target INR 2.5 (2.0 to 3.0) and a TTR >72% or
 - NOAC a direct thrombin or factor Xa inhibitor (for people with non-valvular AF)



Rehabilitation: PADL & EADL

Personal activities of daily living (PADL)

 Washing, dressing, bathing, toileting, eating and drinking

Extended activities of daily living (EADL)

 Domestic and community activities such as shopping, cooking and housework that allow complete or virtually complete independence

- Involve expert OT
- Aim to achieve activities safely
- Provide (and train how to use) any adaptations or equipment needed to perform activities safely
- Goal setting
- Self-efficacy
- Social interaction
- Individualised, tailored PoC



Rehabilitation: a checklist!

- Swallowing
- Driving
- EoLC
 - 1 in 7 die as inpatient
 - 1 in 20 EoLC within 72 hours
- Depression
- Pain
 - Amitriptyline, gabapentin, pregabalin
 - NSAID, TENS, opioids
- Sexual dysfunction
 - Phosphodieterase inhibitors c/i 3/12
- Contractures

- Vision
- Memory, executive function, cognitive flexibility, mental capacity
- Communication
- Constipation
- Continence
- Fatigue
- Balance
- Walking
- Spatial and visual awareness



Take home points

- FAST -> 999
- TIA refer to be seen within 24 hours
- Aspirin 300 mg 2 weeks
- 130/80
- >40% non-HDL
- Clopidogrel 75 mg lifelong
- Atorvastatin
- Long term



Essential Knowledge Updates Journal watch and Hot Topics

Clinical relevance of thrombocytosis in primary care BJGP, June 2017

- Prospective cohort study using CPRD 2000-2013
- 1-year incidence of cancer was compared between two cohorts: 40,000 patients aged ≥40 years with a platelet count of >400 (thrombocytosis) and 10,000 matched patients with a normal platelet count
- Results
 - Thrombocytosis is a risk marker of cancer in adults; 11.6% and 6.2% cancer incidence in males and females, respectively
 - The risk of cancer increased to 18.1% for males and 10.1% for females, when a 2nd raised platelet count was recorded within 6 months
 - Lung and colorectal cancer were more commonly diagnosed with thrombocytosis
 - 1/3 of patients with thrombocytosis and lung or colorectal cancer had no other symptoms indicative of malignancy



Trial of pregabalin for acute and chronic sciatica NEJM, March 2017

- A randomised, double-blind, placebo-controlled trial
- 108 received pregabalin (150 mg per day that was adjusted to a maximum dose of 600 mg per day) and 101 received placebo for up to 8 weeks. The primary outcome was the leg-pain intensity score on a 10-point scale (with 0 indicating no pain and 10 the worst possible pain) at week 8
- Results
 - At week 8, the mean unadjusted leg-pain intensity score was 3.7 in the pregabalin group and 3.1 in the placebo group (P = 0.19)
 - At week 52, the mean unadjusted leg-pain intensity score was 3.4 in the pregabalin group and 3.0 in the placebo group (P = 0.46)
 - A total of 227 adverse events were reported in the pregabalin group and 124 in the placebo group



Effect of Oral Dexamethasone Without Immediate Antibiotics vs Placebo on Acute Sore Throat in Adults: A Randomised Trial. JAMA, April 2017

- Antibiotics are prescribed at 60% of GP sore throat consultations
- Double-blind RCT in 42 GP practices in South and West England. 576 adults recruited on the day of presentation with acute sore throat not requiring immediate antibiotic therapy. Participants were given a single oral dose of 10 mg of dexamethasone (n = 293) or identical placebo (n = 283)
- Results
 - At 24 hours no significant difference between groups
 - At 48 hours, 102 participants (35.4%) in the dexamethasone group vs 75 (27.1%) in the placebo group achieved complete resolution of symptoms, a risk difference of 8.7% and a relative risk of 1.31 (95% CI, 1.02 to 1.68; P = .03; NNT 12)



Follow-up of Prostatectomy versus Observation for Early Prostate Cancer. NEJM, July 2017

- In the PIVOT study 731 men with localised prostate cancer were randomised to radical prostatectomy or observation. They found no significant differences in mortality between the 2 groups for 10yrs
- Results
 - During 19.5 years of follow-up death occurred in 223 of 364 men (61.3%) assigned to surgery and in 245 of 367 (66.8%) assigned to observation (absolute difference in risk, 5.5%; 95% CI, -1.5 to 12.4; P = 0.06)
 - Death attributed to prostate cancer or treatment occurred in 27 men (7.4%) assigned to surgery and in 42 men (11.4%) assigned to observation (absolute difference in risk, 4.0%; 95% CI, -0.2 to 8.3; P = 0.06)
 - Surgery may have been associated with lower all-cause mortality than observation among men with intermediate-risk disease but not among those with low-risk or highrisk disease



Antibiotics for acute bronchitis. Cochrane review, June 2017

- Included 17 trials with 5099 participants. The quality of trials was generally good
- Results
 - At follow-up there was no difference in participants described as being clinically improved between antibiotic and placebo groups (11 studies, 3841 participants, risk ratio (RR) 1.07, 95% CI 0.99 -1.15)
 - Participants given antibiotics were less likely to have a cough (NNT 6) and a night cough (NNT 7)
 - Participants given antibiotics had a shorter mean cough duration (7 studies with 2776 participants, mean difference (MD) -0.46 days)
 - There was a significant trend towards an increase in adverse effects in the antibiotic group (12 studies with 3496 participants, RR 1.20; NNH 24)



Association between continuity of GP care and hospital admissions: BMJ Feb 2017

- Cross sectional study CPRD. 230,472 patients aged between 62-82 years at least 2 GP contacts between April 2011 and March 2013
- Main outcome number of hospital admissions for ambulatory care sensitive conditions (those considered manageable in primary care)
- Results
 - The average usual provider of care index score was 0.61. Continuity of care was lower among practices with more doctors (0.59 in large practices vs 0.70 in small practices)
 - Higher continuity of care was associated with fewer admissions for ambulatory care sensitive conditions
 - An increase in the usual provider of care index of 0.2 would potentially reduce these admissions by 6.22% (95% CI 4.87% to 7.55%)
 - There was greater evidence for an association among patients who were heavy users of primary care



Essential Knowledge Update 2017.1

Managing common infections Public Health England, 2016

Managing common infections

UK research indicates

- GPs recognise the wider importance of resistance
- Not a problem in their practice
- Believe hospitals/other prescribers e.g. vets also main contributors to resistance
- 80% of antibiotic prescribing in general practice





Sore throat

- 82 % of cases resolve in less than 7 days
- Use FeverPAIN score:
 - Fever in last 24 h
 - Purulence
 - Attend rapidly under three days;
 - Severely Inflamed tonsils;
 - No cough or coryza



- Score 0-1: 13-18% streptococci no antibiotic.
- 2-3: 34-40% streptococci 3-day delayed antibiotic.
- 4-5: 62-65% streptococci if severe, immediate antibiotic, or 48-hour delayed antibiotic
- Phenoxymethylpenicillin 500 mg qds 5-10 days
- Clarithromycin 250 mg bd 5 days if allergic
- Erythromycin 250 mg qds 5 days if pregnant and allergic

Otitis media

- AOM resolves in 60% cases within 24 hours, 80% within 7 days
- Optimise analgesia
- Antibiotics reduce pain only after two days
- To prevent mastoiditis NNT >4000
- Consider delayed prescribing for 2-3 days. Immediate prescribing if:
 - <2 years and bilateral AOM and fever, tugging ears, crying, irritability, difficulty sleeping, less playful, eating less
 - All ages with otorrhoea
- Treat with amoxicillin or erythromycin (when allergic)



Otitis Externa

- Treat with analgesia and apply localised heat
- If no improvement:
 - Topical acetic acid tds
 - Topical neomycin with steroid tds
- If cellullitis or disease extends or systemic signs of infection:
 - Start oral flucloxacillin refer to exclude malignant otitis externa



Rhinosinusitis

- More than 80% resolve without treatment
- Paracetamol/Ibuprofen, nasal steroid if >12 years, nasal saline
- Back-up antibiotic if purulent nasal discharge and severe unilateral pain and fever and marked deterioration after 10 days
- If systemically unwell treat immediately
 - Phenoxymethylpenicillin
 - Doxycycline or Clarithromycin if allergic to penicillin



Urinary Tract Infections I

UTI in adults (lower) PHE UTI	All patients first line antibiotic: nitrofurantoin if GFR >45mls/min. ^{3A+,4A+} If GFR 30-45, only use if no alternative. ^{4A+,5D}	First line: nitrofurantoin ^{15%} If low risk of resistance: ¹⁶⁸⁺ trimethoprim ^{17D,18A+}	100mg m/r BD, <i>OR</i> 50mg i/r QDS ^{27A-} (BD dose increases compliance) ^{28D} 200mg BD ^{23A+} Women: 3 days ^{23A+} .		
Diagnosis	Treat women with severe/≥3 symptoms. ^{10,28-}	If first line unsuitable or	34B+,35A-,36A+		
TARGET UTI	Women <65 years (mild/≤2 symptoms): ¹⁰ pain relief, ^{6A,7A-,8B-} and consider delayed antibiotic. ^{9B-,10A+} If urine not cloudy, 97% NPV of no UTI. ^{11A-}	GFR<45mls/min: ^{AAA} pivmecillinam ^{196+,20D,21A+} If organism susceptible:	400mg stat then 200mg TDS ^{29B+,30B+} (400mg if high resistance risk) ^{29B+}		
RCGP UTI	If urine cloudy, use dipstick to guide treatment: ^{1D,11A-} nitrite, leukocyctes, blood all negative 76% NPV; ^{11A-}	amoxicillin ^{22A+,23A+} If high resistance risk:	500mg TDS ^{23A+} Women and men: 3g stat ^{26B-}		
SIGN UTI	nitrite plus blood or leukocytes 92% PPV of UTI. ^{11A-}	fosfomvcin ^{16B+,24A+,25B-,26B-}	∫ Men: 3g stat 3 days later (unlicensed) ^{26B-}		
	Men <65 years: consider prostatitis and send	Low risk of resistance: younger women with acute UTI and no risk.318-,380			
NHS Scotland	MSU, ^{10,120} or if symptoms mild or non-specific, use	Risk factors for increased resistance include: care-home resident; ^{13A-,14B-}			
UTI	negative dipstick to exclude UTI.	recurrent UTI; hospitalisation for >7 days in the last 6 months; unresolving			
	>65 years: ^{tore} treat if fever ≥38°C, or 1.5°C above	urinary symptoms; recent travel to a country with increased resistance;			
	base twice in 12 hours, and >1 other symptom.	previous UTI resistant to trimethoprim, cephalosporins, or quinolones. 39C,40B+,41D			
	If treatment failure: always perform culture."	If risk of resistance: send urine for culture and susceptibilities; safety net.2015			

Figure 12: Summary table for UTI in adults. Public Health England



Urinary Tract Infections II

UTI in patients with catheters: antibiotics will not eradicate asymptomatic bacteriuria;^{1D,2D,3A-} only treat if systemically unwell or pyelonephritis likely.^{2D} Do not use prophylactic antibiotics for catheter change unless there is a history of catheter-change-associated UTI or trauma.^{4D,5A+} Take sample if new onset of delirium, or one or more symptoms of UTI.^{3A,68-,7D}

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UTI in pregnancy	Send MSU for culture; ^{1D} start antibiotics in all with significant bacteriuria, even if asymptomatic. ^{1D}	First line: nitrofurantoin (avoid at term) ^{2A-,3D,7A+}	100mg m/r BD ^{2A-,9C} OR 50mg i/r QDS ^{2A-,9C}]
SIGN UTI	Second line: trimethoprim; avoid if low folate status, ^{2A,4D,5D} or on folate antagonist. ^{4D,5D} Third line: cephalosporins, as risk of <i>C. difficile</i> . ^{6C}	Second line: trimethoprim ^{2A-,4D,7A+} (give folate if first trimester) ^{5D} Third line: cefalexin ^{4D,8D}	200mg BD (off-label) ^{7A+} 500mg BD ^{9C}	7 days ^{10D}
Acute prostatitis	Send MSU for culture and start antibiotics. ^{1D} 4 week course may prevent chronic prostatitis. ^{1D,2D} Quinolones achieve high prostate concentrations. ^{2D}	Ciprofloxacin ^{10,30} OR ofloxacin ^{10,30} Second line: trimethoprim ^{1D}	500mg BD ^{1D} 200mg BD ^{1D} 200mg BD ^{1D}	} 28 days ^{1D,2D}
UTI in children NICE UTI in under 16s	Child <3 months: refer urgently for assessment. ^{1D} Child ≥3 months: use positive nitrite to guide antibiotic use; ^{1A} send pre-treatment MSU. ^{1D} Imaging: refer if child <6 months, or recurrent or	Lower UTI: nitrofurantoin ^{1A-} OR trimethoprim ^{1A-} Image: Constant in the image: Constant		3 days ^{1A+}
	atypical UTI. ^{1D}	assess for signs of systemic infection: ^{1D} consider systemic antimicrobials. ^{1D}		
Acute pyelonephritis	If admission not needed, send MSU for culture and susceptibility testing, ^{1D} and start antibiotics. ^{1D} If no response within 24 hours, seek advice. ^{1D,2D} If ESBL risk, ^{3A+} and on advice from a	Ciprofloxacin ^{2D,5A-,6D} OR co-amoxiclav ^{2D,5A-} If organism sensitive:	500mg BD ^{20,5A-,6D} (a) 500/125mg TDS ^{2D} (a)	7 days ^{20,5A-,7A+} 7 days ^{5A-,7A+}
	microbiologist, consider IV antibiotic Via OPAT.	trimetnoprim	200mg BD	14 days
Recurrent UTI in non-pregnant women (2 in 6 months or ≥3 in a year) TARGET UTI	First line: advise simple measures, ^{1D} including hydration; ^{1D,2D,3D} ibuprofen for symptom relief, ^{4A,5A-} Cranberry products work for some women. ^{6D,7A+,8A+} Second line: stand-by ^{1D} or post-coital antibiotics. ^{9A+} Third line: antibiotic prophylaxis. ^{1D,9A+,10D} Consider methenamine if no renal/hepatic impairment. ^{11A+}	Antibiotic prophylaxis: First line: nitrofurantoin ^{9A+} Second line: ciprofloxacin ^{9A+} If recent culture sensitive: trimethoprim ^{9A+} Methenamine hippurate ^{11A+}	100mg m/r ^{9A+} 500mg ^{9A+} 100mg ^{9A+} 100mg ^{9A+} 1g BD ^{11A+} At night or post-coital stat (off-label) 1D,9A+,100	 3-6 months, ^{1D} then review recurrence rate and need^{1D,9A+} 6 months^{1D,11A+}



Figure 13: Summary table for UTI in pregnancy. Public Health England

Use the TARGET toolkit!

TARGET Antibiotics Toolkit

What is TARGET?

TARGET stands for: Treat Antibiotics Responsibly, Guidance, Education, Tools

The toolkit helps influence prescribers' and patients' personal attitudes, social norms and perceived barriers to optimal antibiotic prescribing. It includes a range of resources that can each be used to support prescribers' and patients' responsible antibiotic use, helping to fulfil CPD and revalidation requirements.



Who is it for, and how can it be used?

Using the resources in the TARGET Antibiotics Toolkit will enable primary care organisations to demonstrate compliance with the Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance.

The toolkit is designed to be used by the whole primary care team within the GP practice or out of hours setting. These resources can be used flexibly, either as standalone materials or as part of an integrated package. We do recommend that ALL resources are used if this is feasible.

Leaflets to share with patients	\oplus
Antibiotic prescribing data	\oplus
Audit toolkits and action planning	\oplus
Training resources	\oplus
National Antibiotic Management Guidance	\oplus
Resources for clinical and waiting areas	\oplus



Essential Knowledge Update 2017.1

Non-alcoholic fatty liver disease (NAFLD): assessment and management NICE CG49, July 2016

Introduction

- We all store some TGs within hepatocytes
- Fatty liver (steatosis) exists when this level of storage exceeds 5%
- NASH (Non-alcoholic steatohepatitis) = fatty liver + cell damage + inflammation

NAFLD = a disease spectrum with fatty change being common and benign

- Upto 30% of adults
- 90% of morbidly obese
- NAFLD most prevalent (+ progressive) in: T2DM (53%)
 Metabolic syndrome (54%)



- NAFLD and NASH usually asymptomatic and
- <u>LFTS are often normal and USS cannot</u> reliably detect steatosis until ~ 30%

However...

- 5-6% -> NASH
- Some -> progressive fibrosis, cirrhosis, hepatocellular carcinoma, death.

Figure 14: Non-

alcoholic fatty liver disease - spectrum of disease. Non-alcoholic fatty liver disease summary of NICE guidance. BMJ 2016; 354:i4428, September 2016. Reproduced with permission.



The prevance in the general population for different stages of non-accordic latify liver disable is uncertain.
"The endence for progression does not take into account the effect of interventions explored in the guideline that may modify progression such as lifestyle changes or pharmacological therapy.
AST: ALT ratio

If raised ALT on initial LFT, need a repeat LFT to confirm - with AST

Typical pattern for NAFLD:

- Initially* AST < ALT
- Usually AST:ALT ratio < 0.8
- GGT mildly elevated (35)
- Ferritin elevated
- Alk Phos mildly elevated (125)

Typical pattern for ALD:

Usually AST:ALT > 1.5-2 and elevated MCV

*If NASH and AST:ALT ratio >1 then ? progressive cirrhosis



Abnormal liver function tests

Most steatosis is due to NAFLD or alcohol misuse Clearly important to rule out other causes:

- Drugs e.g.: amiodarone steroids, tamoxifen
- Hepatitis C
- Haemachromatosis
- (+ remember to exclude CCF)

But wide-ranging differential, so need fuller liver screen:

 FBC, U&E, TFT, Lipids, HbA_{1c}, ferritin, Hepatitis screen, Coeliac screen, coagulation, caeruloplasmin, liver autoantibodies, Immunoglobulins, AFP, A1AT, Liver USS



NASH (Non-alcoholic steatohepatitis)

- 5-6% of patients with NAFLD will get NASH
- At any given time:
 - 2-3% of people with NAFLD will have NASH
 - 38% of morbidly obese with NAFLD will have NASH
- Worsening fibrosis can have improving LFTs i.e: a false sense of security
- Average age for NAFLD -> NASH is 40-50 yrs.
- Average age for NASH -> cirrhosis is 50-60 years
- Which patients will progress? NICE does not provide guidance on predictive factors for NASH and fibrosis – but the presence of DM is considered a bad prognostic indicator



Diagnosing severity

- The principle is identifying those with advanced fibrosis
- LFTs unhelpful and can give false reassurance.
- FIB-4: Uses age, platelets, AST, ALT.
- Developed for patients with hepatitis C but useful in NAFLD
- gihep.com/calculators/hepatology/fibrosis-4score

NAFLD fibrosis score: uses age, BMI, presence of impaired fasting glucose or diabetes, AST, ALT platelets and albumin levels.

BARD score:

AST/ALT ratio $\geq 0.8 = 2$ points BMI $\geq 28 = 1$ point, diabetes = 1 point

Score of <2 = NPV of 95-97%. <u>But</u> the typical NAFLD cohort will often score 2 or more, limiting it's use....



The ELF test

- Enhanced Liver Fibrosis test
- `may not' be available in your area
- Diagnosing the severity of NAFLD
- 3 direct biomarkers:
- Hyaluronic acid
- Procollagen III amino terminal peptide
- Tissue inhibitor of metalloproteinase 1

When to do?

- No recommendation on screening for early stages of fibrosis
- Every 3 years in adults with NAFLD

Interpretation?

- Score 10.51+ = *likely* severe fibrosis: refer to hepatologist
- Score <10.51 = unlikely advanced fibrosis: manage in primary care.



Lifestyle interventions

Some evidence that exercise reduces liver fat content. This is irrespective of BMI

- Physical activity
- Diet and < 14 units/week alcohol

Insufficient evidence on:

- Caffeine
- Fructose
- Omega-3 fatty acids
- Probiotics





Treatment of advanced fibrosis

- Many options examined including metformin
- Only Vitamin E (adults and children) and
- Pioglitazone (adults only) recommended
- Secondary/tertiary care only (tertiary care if <16 years)
- Choice of agent depends on comorbidities/risks of adverse events
- Monitor Tx with ELF test 2 yearly:
- if rises, adults swap to alternative Tx, children stop vitamin E



NAFLD and other conditions

Patients with NAFLD \uparrow risk of

- Type 2 diabetes
- Hypertension
- Chronic kidney disease

Type 2 diabetes + NAFLD ↑ risk of:

- Atrial fibrillation
- Myocardial infarction
- Ischaemic stroke
- Death from cardiac causes

NAFLD is not a reason to stop statins unless enzymes double within 3 months of initiation.





Take home points

- Common
- Asymptomatic
- Progressive
- Asymptomatic
- Interpret AST < ALT
- Monitor
- Treat
- Refer



Q1 www.slido.com

Mr G is a 56 year old smoker recently diagnosed with COPD. This was following recurrent chest symptoms. His O2 sats are 96% on air, and a recent CXR was reported as showing changes consistent with COPD. His FEV1 was 63% predicted with a FEV1/FVC ratio of 0.65, and he has already been prescribed salbutamol.

Which is the SINGLE MOST appropriate next step? Select ONE option only.

- A. Prescribe a LAMA
- B. Prescribe carbocysteine
- C. Check symptoms and exacerbation history
- D. Refer for pulmonary rehab
- E. Prescribe LABA/ICS



Q2 www.slido.com

You see Mr G again 18 months later. You congratulate him on stopping smoking. He was started on seretide (LABA/ICS) last year by a colleague. His recent spirometry showed a stable FEV1 61%. He reports no exacerbations in the past year but still has significant respiratory symptoms on assessment.

Which is the SINGLE MOST appropriate INITIAL step? Select ONE option only.

- A. Prescribe a LAMA in addition to LABA/ICS
- B. Continue LABA/ICS
- C. Reduce/stop ICS
- D. Prescribe carbocysteine
- E. Prescribe an antibiotic/steroid rescue pack



Q3 www.slido.com

An 59-year-old Caucasian man with hypertension had an ischaemic stroke six weeks ago. His echocardiogram and renal function are normal. Carotid dopplers showed mild bilateral atherosclerosis. His BP is consistently 148/66 on 10mg amlodipine and 10mg ramipril daily.

Which is the SINGLE MOST appropriate antihypertensive management option? Select ONE option only.

- A. Add doxazosin
- B. Add indapamide
- C. Switch amlodipine to bisoprolol
- D. Switch ramipril to candesartan
- E. No change in medication



Q4 www.slido.com

An elderly temporary resident collapses in the waiting room. He is pale, sweaty and slurring his speech. The practice nurse was about to dress his leg ulcer. His blood pressure is 136/72, p 86 regular, sats 98%. She calls you for help and is concerned he is having a stroke.

Which is the SINGLE MOST appropriate INITIAL management step? Select ONE option only.

- A. Alcohol breath test
- B. Aspirin 300 mg
- C. Blood glucose
- D. Clopidogrel 75 mg
- E. ECG



Q5 www.slido.com

A 45-year-old woman has an abdominal ultrasound scan with an incidental finding of fatty liver.

What is the single best ESTIMATE of her long-term risk of progressive liver disease? Select ONE option only.

- A. 1%
- B. 5%
- C. 10%
- D. 25%
- E. 50%



Q6 www.slido.com

A 54-year-old woman is diagnosed with NAFLD following an ultrasound scan. She is a nonsmoker, drinks about two glasses of wine at the weekend and two cups of coffee daily. Her BMI is 27 kg/m2.

According to current guidance, which is the SINGLE MOST appropriate INITIAL lifestyle modification? Select ONE option only.

- A. Increase exercise
- B. Reduce alcohol
- C. Reduce caffeine
- D. Supplement diet with omega-3 fatty acids
- E. Supplement diet with probiotics



Q7 www.slido.com

A 25 year old female who is 20 weeks pregnant has a confirmed urinary tract infection. Surprisingly, the E.Coli strain that's causing the infection is sensitive to all antibiotics.

What is the most appropriate first line treatment? Select ONE option only.

- A. Cefalexin
- B. Trimethoprim
- C. Nitrofurantoin
- D. Amoxicilin
- E. Pivmecillinam



Q8 www.slido.com

How many patients with contact dermatitis can expect complete resolution of their symptoms? Select ONE option only.

- A. 10%
- B. 25%
- C. 50%
- D. 75%
- E. 90%

