Adult Headache Primary Care Pathway

- Do you have a headache all the time or does it come & go? (Tension Type Headache or Medicines Overuse Headache usually has pain all the time)
- If intermittent what do you do when you have the pain? (patients with migraine want to lie/sit still when pain is bad, those with cluster headaches can't sit still when having an attack)
- What medication have you taken before? What are you taking now?

Patient attends with Headache

Take history & examine including BP, Temporal arteries (if age > 50years) & fundoscopy

Red Flags - Headache that is new or unexpected in an individual patient

- Thunderclap headache (intense headache of "explosive" onset suggest SAH)
- Jaw claudication (suggests temporal arteritis - take ESR /CRP & start steroids immediately)
- Headache with atypical aura (duration >1 hour, or including significant / prolonged motor weakness)
- Headache associated with postural change (bending) or coughing (possible raised ICP)
- New onset headache in patient with history of cancer, especially if < 20 years
- Unilateral red eye – consider angle closure glaucoma
- Remember carbon monoxide poisoning (also causes lethargy + nausea)
- Rapid progression of sub-acute focal neurological deficit*
- Rapid progression of unexplained cognitive impairment / behavioural disturbance*
- Rapid progression of personality changes confirmed by witness where there is no reasonable explanation*
- New onset headache in a patient with a history of HIV / immunosuppression*
- New onset headache in a patient older than 50 years *
- Headache causing patients to wake from sleep*
- Progressive headache, worsening over weeks or longer*

Consider admission, urgent MRI/CT scan (marked *) or 2ww referral as appropriate

Eliminate red flags

Secondary headache - non serious cause

Posterior headaches often relate to cervicogenic headaches

Unlikely to be sinuses, TMJ dysfunction or teeth unless other signs /symptoms indicative of this

Consider medication – esp combined oral contraceptive pill (OCP). If patient has migraines with aura then OCP is contraindicated

Consider facial pain trigeminal neuralgia as a cause of 'headache'

Primary Headache

The major types are listed below – it is important to realise however that patients may present with more than one type, so can develop tension type headaches on underlying migraine, or medication overuse with tension type headaches
NICE recommends keeping a headache diary

Most people who attend their GP with recurrent / chronic headaches have a migraine.

A recurrent severe headache associated with nausea and photophobia is 98% predictive of migraine

Migraine without aura	**Migraine with aura**	**Tension type headache (TTH)**	**Medication Overuse (MOH)**	**Cluster headache**
Diagnostic criteria - at least 5 attacks fulfilling criteria 1-4 1) Lasts 4-72 hours untreated 2) At least 2 of the following Unilateral location Pulsating quality Moderate/severe pain 3) Nausea / vomiting and/or photophobia 4) No other cause identified **Chronic migraine with or without aura Occurring everyday needs specialist Review**	Occurs in 1/3 of migraine sufferers Aura 5-60 minutes prior to headache Usually visual – note blurring & spots not diagnostic **Chronic migraine with or without aura occurring everyday needs specialist review**	Usually episodic. Usually last 30mins to 7 days Described as pressing/tight Deemed chronic if >15days per month Often assoc. with stress / anxiety /depression Can occur in combination with migraine and secondary headache triggers especially cervicogenic /neck problems	**Medication history is crucial especially use of over the counter analgesia. Can be caused by simple analgesic and opioid medication**. Can occur with other headache types Prophylaxis medication doesn't help & can worsen symptoms	Affects M:F (3:1 ratio) Usually aged 20+ years Bouts last 6-12 weeks. Usually occur 1-2x year, often at same time of year. Rarely chronic throughout year. Very severe – often at night & lasts 30-60 minutes Strictly unilateral Ipsilateral conjunctival injection, rhinorrhea +/- Ptosis confirm

Adult Headache Pathway

Migraine with / without aura

Step1 - For acute attacks patients are encouraged to self -care with simple analgesic & triptan (evidence suggest combination may be best)
- Consider adding anti-emetic & avoid opioids
- May need to try more than one type of triptans. Care needed as frequent use can lead to triptan overuse (a form of MOH). Aim to use <2 doses / week.
- Use most cost effective first. Also note migraines often return 48-72 hours post use of a triptan.

Step 2 - If headaches are frequent &/or acute medication is used very frequently, prophylaxis should be considered. This should be titrated until control is gained and may take 6-8 weeks before beneficial effects are seen. It will usually be continued for at least 6 months before considering a trial without.

Prophylaxis medication:
Propanolol 80-240mg in divided doses
Or
Topiramate* - 25mg od to max 50mg bd (now recommended by NICE) – see additional notes below
(NB pizotifen not recommended)

Step 3
Amitriptyline -10mg nocte, increasing to up to 150mg (NICE guidelines suggest poor evidence of efficacy). Only use nortriptyline if amitriptyline effective but patient unable to tolerate side effects

Tension Type headache (TTH)

Step 1- Simple analgesic (avoid opioids) along with explanation & reassurance. Look at triggers and consider MOH.

Step 2- consider alternative NSAID such as naproxen 500mg bd- maybe worthwhile taking regularly for a while if headaches are severe (with PPI cover if needed)

Step 3- Promote the use of self-care treatments such as riboflavin or acupuncture

Step 4- if headaches are severe, frequent & persist consider amitriptyline starting at low dose of 10mg at night, slowly increasing to 75-150mg

Note: β-blockers not usually helpful & benzodiazepines should be avoided. SSRIs not helpful unless there is underlying depression

Reconsider and exclude red flags again (See part 1) Also consider mixed headaches- Migraine & TTH and/ or MOH

REFER

Cluster headache

Most patients with new onset cluster headaches will require referral to a neurologist for advice

Step 1- though short lived medication is nearly always needed (subcut sumatriptan is gold standard but consider intranasal triptan). Oxygen should only be prescribed if recommended by a neurologist

Step 2 – Prophylaxis
Verapamil 80mg TDS starting dose then increase dose (up to 960mg daily) as prednisolone withdrawn. Prednisolone should be started at the same time as verapamil at a dose of 60-100mg daily for 5 days then decrease by 10mg every 3 days, so that treatment is discontinued after 2-3 weeks.

Medicine Overuse Headache (MOH)

Medicine Overuse Headache (MOH)
- Only treatment is withdrawal
- Education & communication is critical as headaches will initially worsen
- If due to simple analgesia -complete cessation required.
- If due to opioids then undertake gradual wean until stop.
- Naproxen 250mg-500mg BD can be used for 4 weeks to manage acute migraines during withdrawal (no supplies after 4 weeks)
- If the patient struggles, Amitriptyline as a prophylaxis maybe used.

Remember- lifestyle measures may help

Menstrual Migraines can be identified via headache diary. May respond to hormonal Rx see www.bash.org.uk

Care needed with pregnancy- these guidelines do not apply to pregnancy or children- see NICE & BASH guidelines at www.bash.org.uk

Don't forget patients often have more than one type of headache

Adult Headache Guideline

The following information is to support prescribers regarding the medicines aspects of the pathway, please refer to the BNF or Summary of Product Characteristics for further information on contraindications, precautions, adverse effects and interactions.

Treatment of acute migraine

A stepped approach is often recommended commencing as early as possible with an analgesic and anti-emetics/pro-kinetic if required, and escalating to a 5HT1 receptor agonist (triptan) if this approach fails.

Aspirin or ibuprofen with or without paracetamol	Need to establish therapeutic levels quickly aspirin 600-900mg TDS or ibuprofen 400-600mg up to QDS and/or paracetamol 1g QDS
Metoclopramide or Domperidone or Prochlorperazine (Buccal)	Add an anti-emetic (such as metoclopramide, domperidone, or prochlorperazine) even in the absence of nausea and vomiting. Buccal prochlorperazine is recommended if actively vomiting. Domperidone should used for a maximum of 7 days & Metoclopramide for a maximum of 5 days
Diclofenac suppositories	Diclofenac 50mg or 100mg – see notes below. Should be considered if vomiting

Notes:

1. Please be aware of recent MHRA guidance on the use of anti-emetics and diclofenac.
2. Medication should be given as soon as the onset of an attack is recognised.
3. The addition of a gastric motility agent will aid gastric emptying, as well as relieving nausea.
4. Anti-migraine drugs containing Metoclopramide are not suitable for patients under the age of 20 years.
5. Since peristalsis is often reduced in migraine attacks, dispersible preparations may be helpful.
6. Suppositories are useful if vomiting or severe nausea present.

Triptans ($5HT_1$-receptor agonists)

Try using the most cost-effective preparation first line, current Derbyshire formulary triptans are listed below.

Sumatriptan (first line)	Tablets 50, 100mg Injection 6mg per 0.5ml Nasal spray 10mg or 20mg per 0.1ml/dose
Zolmitriptan	Tablets 2.5mg or oro-dispersible 2.5, 5mg

Notes:

1. NICE recommends that oral triptans should be used first line and other preparations only considered if these are ineffective or not tolerated.
2. A second Triptan should not be taken if the first dose is ineffective.
3. Where appropriate, medication should be prescribed generically.
4. Triptans are contraindicated in, uncontrolled hypertension, or risk factors for coronary heart disease or cerebral vascular disease.
5. Different Triptans have different profiles of 5HT site action. If the first Triptan tried fails, it is worth trying alternative ones. A pragmatic approach would be to choose the cheapest one from each group as a first line.
6. Oral sumatriptan (50 mg or 100 mg) is suitable for most people. Zolmitriptan, is the Derbyshire formulary alternative if sumatriptan is not effective.
7. If vomiting restricts oral treatment, consider a non-oral formulation (such as zolmitriptan nasal spray or subcutaneous sumatriptan).
8. 'Oro-dispersible' preparations which dissolve on the tongue are absorbed after swallowing and are not classified as non-oral preparations.

Prevention of migraine

Prophylaxis is used to reduce the number of attacks in circumstances when acute therapy, used appropriately, gives inadequate symptom control. There are no specific guidelines as to when prophylaxis should be commenced. Considerations include frequency, impact, failure of acute therapy, avoidance of medication overuse headache. The potential for teratogenic effects should be noted particularly with anti-epileptic medications. In line with NICE recommendations these updated guidelines no longer include a recommendation to use pizotifen or gabapentin. Additionally, propranolol is now recommended first line again in line with NICE recommendations and licensed indications.

Notes:

1. Propranolol 80mg-240mg daily in divided doses is the β-blocker of choice. Metoprolol at a dose of 100mg-200mg daily in divided doses is a suitable licensed alternative if propranolol cannot be tolerated.
2. Start at the lowest dose and build up gradually. Maintain the maximum tolerated dose for a minimum of 6 weeks before assessing. Discuss with patient at 6 months whether a gradual reduction and elimination of prophylactic medication might be considered.
3. Amitriptyline is useful with co-existent tension type headache, disturbed sleep,

or depression.

4. If both topiramate and propranolol are unsuitable or ineffective, consider advising patients to self-fund courses of up to 10 sessions of acupuncture over 5 to 8 weeks. **Acupuncture is not commissioned by Derbyshire CCG**.
5. Advise people with migraine that riboflavin (400 mg once a day) may be effective in reducing migraine frequency and intensity for some people. **This is not prescribable on the NHS as it is a food supplement. Patients should be advised to purchase this over the counter as a part of self-care.**
6. Sodium valproate [unlicensed indication] can also be considered in patients with episodic or chronic migraine. Start 150mg/day, increase by 150mg every 2 weeks to 600mg/day, max: 1200mg/day.
   The MHRA/CHM have released important safety information on the use of antiepileptic drugs and the risk of suicidal thoughts and behavior. In addition, the MHRA has advised that sodium valproate must not be used in women of childbearing potential unless the conditions of the Pregnancy Prevention Programme are met and alternative treatments are ineffective or not tolerated; it must not be used during pregnancy for migraine prophylaxis.
7. Note that gabapentin is not recommended by NICE for prophylactic treatment of migraine
8. Review the need for continuing migraine prophylaxis 6 months after the start of prophylactic treatment.

Topiramate

Topiramate is licensed for migraine prophylaxis in adults, and it is now recommended for use in the NICE headache clinical guideline.

The SPC (summary of product characteristics) will have full information on cautions,
contra-indications and side effects.

Place in therapy
This will be tailored to each patient, but as highlighted in the headache pathway, it should be considered when:

- The frequency of migraines is such that regular prophylaxis is warranted
- Advise women of childbearing potential that topiramate is associated with a risk of foetal malformations and can impair the effectiveness of hormonal contraception. It is contraindicated in pregnancy and in women of childbearing potential if an effective method of contraception is not used.

Review
Continuing therapy should be reviewed every 6 months.

Titration Schedule
The dosage should then be increased in increments of 25 mg/day administered at 1-2 week intervals. If the patient is unable to tolerate the titration regimen, longer intervals between dose adjustments can be used.

Some patients may experience a benefit at a total daily dose of 50 mg/day. The recommended total daily dose of topiramate as treatment for the prophylaxis of migraine headache is 100 mg/day administered in two divided doses. No extra benefit has been shown from the administration of doses higher than 100 mg/day.

Useful Resources – these guidelines have been developed using NICE and BASH guidelines below

1. NICE Clinical Guideline CG150: Headaches in over 12's: diagnosis and management (September 2012, updated November 2015) https://www.nice.org.uk/guidance/cg150
2. NICE CKS: Migraine. Scenario: Migraine in pregnant or breastfeeding women (Last reviewed April 2019) https://cks.nice.org.uk/migraine#!scenario:2
3. The British Association for the Study of Headache (BASH) https://www.bash.org.uk/guidelines/
4. The International Headache Society http://ihs-classification.org/en/

Self Help Resources

Patient UK – https://patient.info/brain-nerves/headache-leaflet
Migraine Trust - http://www.migrainetrust.org/
Organization for the understanding of cluster headaches - http://www.ouchuk.org
NHS Choices http://www.nhs.uk/conditions/Headache/Pages/Introduction.aspx

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Document control

Development of Guidelines	UHDB neurology team
Consultation with	UHDB Drugs & Therapeutics Committee