Appendices

Appendix 1 Headache Triage [National Headache Pathway[6]]

Red Flags	Amber Flags	Green Flags
• Thunderclap headache • New focal neurological deficit on examination (e.g. hemiparesis) • Systemic features (considering GCA, infection) • New progressive headache in a patient over 50 Headache suggesting the possibility of a brain tumour 1. New headache plus sub-acute progressive focal neurology 2. New headache plus seizures 3. New headache with personality or cognitive change not suggestive of dementia, with no psychiatric history and confirmed by witness	• Changes in headache intensity with changes of posture • Worsening/Triggering headache with Valsalva • Atypical aura (duration >1 hour or including motor weakness) • Progressive headache (worsening over weeks or longer) • Head trauma within the last month • Previous history of cancer or HIV • Re-attendance to A&E or GP surgery with progressively worsening headache severity or frequency	• Recurrent episodic headache, particularly with features of migraine • Long history of daily headache

Red Flag clinical features indicate the need for urgent specialist assessment to exclude a serious underlying cause.
Amber Flags may be a presentation of secondary headache due to serious pathology but can also be caused by primary headache. They may require same day referral or urgent action, depending on the suspected underlying diagnosis.
Green Flags suggest a primary headache disorder. This is most commonly migraine, and if there are no other worrying features, then they can be managed as migraine in Primary Care.

Appendix 2 – Headache Red and Amber Flags and differential diagnoses[1,6]

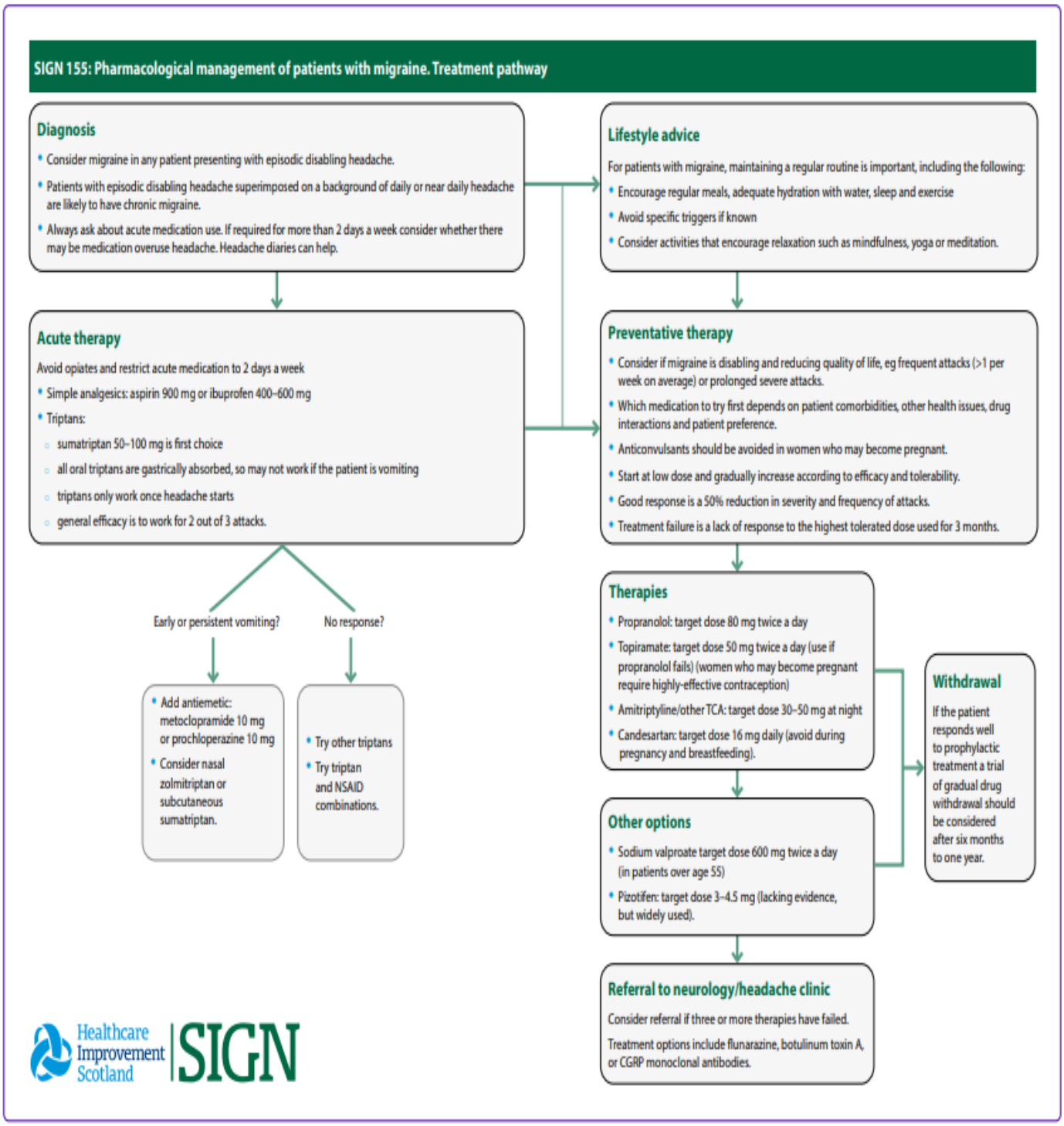
Clinical Features	Potential underlying pathology
Sudden severe (thunderclap) headache	Subarachnoid haemorrhage Venous sinus thrombosis Malignant hypertension Vertebral artery dissection
New progressive headache, age >50	Temporal arteritis Malignancy
Progressively worse headache (any age)	Malignancy/space occupying lesion Subdural haematoma
Papilloedema	Space occupying lesion Benign intracranial hypertension Venous sinus thrombosis
Fever/drowsiness	CNS infection
Neck stiffness/photophobia	CNS infection Subarachnoid infection
New onset neurological deficit, drowsiness	Stroke Malignancy Other space occupying lesion e.g. subdural haematoma CNS infection
Atypical aura (new aura if on CHC (combined hormonal contraceptive pill))	Stroke/transient ischaemic attack (TIA)
Visual disturbance	Glaucoma Temporal arteritis
Dizziness	Stroke
Vomiting	Malignancy CNS infection/abscess Carbon monoxide poisoning
Other household contacts with similar headache	Carbon monoxide poisoning

Postural changes	Space occupying lesion or cerebro-venous sinus thrombosis (worse lying down) Cerebrospinal fluid leak (worse standing)
Triggered by Valsalva manoeuvre	Chiari malformation type 1 (herniation of cerebellar tonsils) Posterior fossa lesion Space occupying lesions
Recent head trauma (past 3 months)	Subdural haematoma
Immunosuppression	CNS infection Malignancy
History of malignancy	Malignancy Cerebral metastases
Pregnancy/recently postnatal	Pre-eclampsia

Appendix 3 – Differentiating common causes of Primary Headache [BASH[7]]
(based on http://www.ichd-3.org)

MIGRAINE	TENSION-TYPE HEADACHE	CLUSTER HEADACHE
Episodic		
Unilateral (although often bilateral)	Bilateral	Unilateral (never bilateral)
Pulsating	Pressing, tightening, non-pulsating	
Moderate or severe	Mild or moderate *but not disabling*	Very severe
Aggravated by, or causing avoidance of, routine physical activity	No aggravation by, or avoidance of, routine physical activity	Restlessness No aggravation by physical activity
Nausea and/or vomiting Photophobia Phonophobia	No nausea, vomiting, photophobia, or phonophobia	*Ipsilateral to pain, there may be:* Conjunctival injection Lacrimation Nasal congestion Rhinorrhoea Eyelid swelling/drooping
Attacks last hours to days (usually 4-72 hours)	Attacks last hours to days	Attacks last from 15 mins to 3 hours
Frequency 1-2 attacks per month		Frequency 1-3 attacks per day (up to 8) and usually occur daily for 2-3 months at a time
Chronic		
Chronic migraine or chronic tension-type headache: At least 15 headache days per month for >3 months with the above clinical description, in the absence of medication overuse		Chronic cluster headache: Attacks occurring for more than 1 year without remission, or remission periods lasting <3 months
Medication-overuse headache		
Ergotamine, triptans, or opioids taken on 10 or more days per month, or 15 days for simple analgesics, for >3 months. Chronic migraine is fulfilled 2 months after medication has been withdrawn without improvement		**No medication overuse headache** Medication-overuse headache only reported in patients with a predisposition to migraine and/or tension-type headache; clinical syndrome of the headache exacerbated by the acute-relief medication overuse is of the migraine and/or tension-type headache[50]

Appendix 4: Drug therapy for migraine



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Note: New Scottish |Medicines Consortium (SMC) guidance issued in September 2023 now recommends rimegepant or atogepant, if there has been a failure of 3 preventative therapies for episodic migraine, with at least 4 attacks per month. This can be initiated in Primary or Secondary care[30].

Rimegepant was also approved by SMC for the treatment of acute migraine with or without aura (July 2023), where at least 2 triptans have been ineffective, or where triptans are contra-indicated or not tolerated[30].