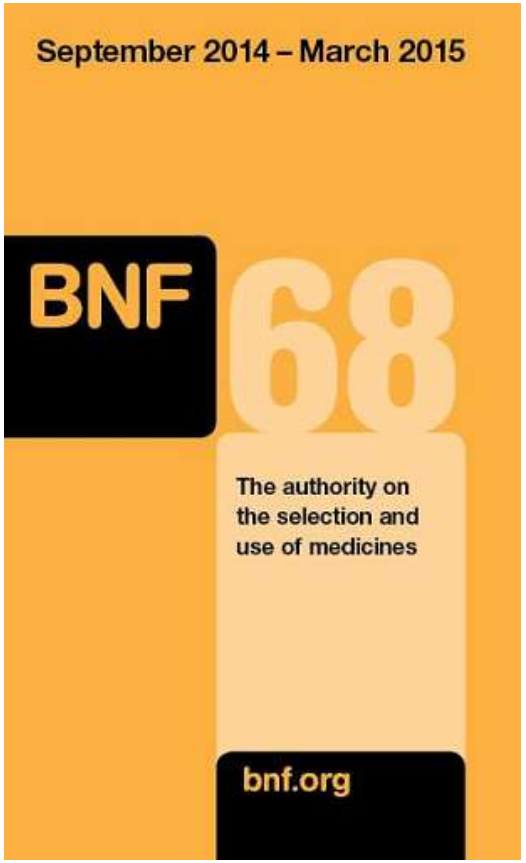
How to use the BNF



Structure of the BNF

- **Guidance on Prescribing**, (writing a prescription, prescribing in palliative care).
- **Emergency Treatment of Poisoning**, management of acute poisoning.
- **Classified notes on clinical conditions, drugs, and preparations:**

  15 chapters, (related to a particular system of the body or to an aspect of medical care). Each chapter is further divided into **classified sections (**usually begins with prescribing notes followed by relevant drug monographs and preparations (see fig. 1)).

Structure of the BNF (cont.)

- **Appendices and Indices:** includes **5 Appendices**

1- drug interactions

2- Borderline substances

3- cautionary and advisory labels for dispensed medicines

4- intravenous additives

5- wound management

The Dental Practitioners' Formulary, the Nurse Prescribers' Formulary, Non medical Prescribing, Index of Manufacturers, and the main Index.

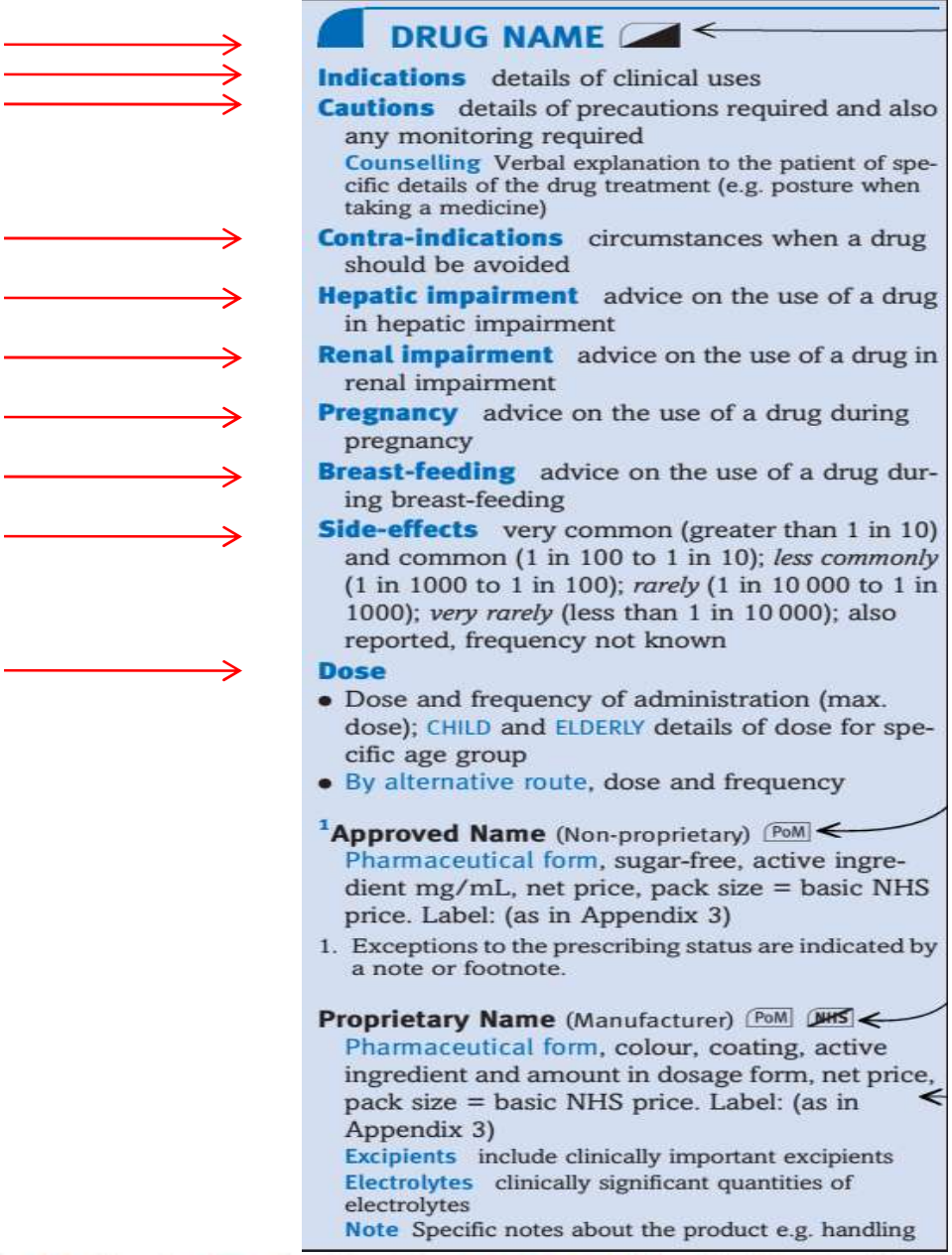

DRUG NAME
Indications details of clinical uses
Cautions details of precautions required and also any monitoring required
Counselling Verbal explanation to the patient of specific details of the drug treatment (e.g. posture when taking a medicine)
Contra-indications circumstances when a drug should be avoided
Hepatic impairment advice on the use of a drug in hepatic impairment
Renal impairment advice on the use of a drug in renal impairment
Pregnancy advice on the use of a drug during pregnancy
Breast-feeding advice on the use of a drug during breast-feeding
Side-effects very common (greater than 1 in 10) and common (1 in 100 to 1 in 10); less commonly (1 in 1000 to 1 in 100); rarely (1 in 10 000 to 1 in 1000); very rarely (less than 1 in 10 000); also reported, frequency not known
Dose
• Dose and frequency of administration (max. dose); CHILD and ELDERLY details of dose for specific age group
• By alternative route, dose and frequency
[1]Approved Name (Non-proprietary) PoM
Pharmaceutical form, sugar-free, active ingredient mg/mL, net price, pack size = basic NHS price. Label: (as in Appendix 3)
1. Exceptions to the prescribing status are indicated by a note or footnote.
Proprietary Name (Manufacturer) PoM NHS
Pharmaceutical form, colour, coating, active ingredient and amount in dosage form, net price, pack size = basic NHS price. Label: (as in Appendix 3)
Excipients include clinically important excipients
Electrolytes clinically significant quantities of electrolytes
Note Specific notes about the product e.g. handling

Figure 1

Finding information in the BNF

- ✓ **Index:**

  where entries are included in alphabetical order of non-proprietary drug names, proprietary drug names, clinical conditions, and prescribing topics. The page reference to the drug monograph is shown in **bold type.**

- ✓ **Contents (p. iv):**

  provides a hierarchy of how information in the BNF is organised.

- ✓ **The beginning of each chapter:**

  includes a classified hierarchy of how information is organised in that chapter.

Finding information in the BNF (cont.)

- ✓ **Running heads:**

  located next to the page number on the top of each page, show the section of the BNF that is being used.

- ✓ **Thumbnails:**

  on the outer edge of each page, show the chapter of the BNF that is being used.

- ✓ **Cross-references:**

  lead to additional relevant information in other parts of the BNF.

Index

Principal page references are printed in **bold** type. Proprietary (trade) names and names of organisms are printed in *italic* type; where the BNF does not include a full entry for a branded product, the non-proprietary name is shown in brackets

A

Contents

2 Cardiovascular system

This chapter also includes advice on the drug management of the following:

- angina, p. 162
- arrhythmias, p. 94
- cardiovascular disease risk, p. 108 and p. 168
- heart failure, p. 117
- hypertension, p. 108
- myocardial infarction, p. 162
- phaeochromocytoma, p. 116
- stroke, p. 157

2.1 Positive inotropic drugs

Positive inotropic drugs increase the force of contraction of the myocardium; for sympathomimetics with inotropic activity see section 2.7.1.

2.1.1 Cardiac glycosides

Digoxin is a cardiac glycoside that increases the force of myocardial contraction and reduces conductivity within the atrioventricular (AV) node.

Digoxin is most useful for controlling ventricular response in persistent and permanent atrial fibrillation and atrial flutter (section 2.3.1). For reference to the role of digoxin in heart failure, see section 2.5.5.

For management of atrial fibrillation the maintenance dose of digoxin can usually be determined by the ventri-

12–24 hours after percutaneous coronary intervention); max. duration of treatment 108 hours

- Angiography *within* 4 hours of diagnosis, by intravenous injection, 25 micrograms/kg given over 3 minutes at start of percutaneous coronary intervention, then by intravenous infusion, 150 nanograms/kg/minute for 18–24 hours; max. duration of treatment 48 hours

Aggrastat® (Correvio) PoM

Concentrate for intravenous infusion, tirofiban (as hydrochloride) 250 micrograms/mL. For dilution before use, net price 50-mL (12.5-mg) vial = £146.11

Intravenous infusion, tirofiban (as hydrochloride) 50 micrograms/mL, net price 250-mL *Intravia®* bag = £160.72

2.10 Stable angina, acute coronary syndromes, and fibrinolysis

2.10.1 Management of stable angina and acute coronary syndromes

Stable angina

It is important to distinguish stable angina from unstable angina. *Stable angina* usually results from atherosclerotic plaques in the coronary arteries that restrict blood flow and oxygen supply to the heart; it is often precipitated by exertion and relieved by rest. Treatment involves management of acute anginal pain, and long-term management to prevent angina attacks and to reduce the risk of cardiovascular events.

Management of stable angina

Acute attacks of stable angina should be managed with sublingual **glyceryl trinitrate** (section 2.6.1); sublingual glyceryl trinitrate can also be taken immediately before performing activities that are known to bring on an attack. If attacks occur more than twice a week, regular drug therapy is required and should be introduced in a step-wise manner according to response.

Patients with stable angina should be given a **beta-blocker** (section 2.4) or a **calcium-channel blocker** (section 2.6.2). In those with left-ventricular dysfunction, beta-blocker treatment should be started at a very low dose and titrated very slowly over a period of weeks or months (section 2.5.5); the rate-limiting calcium-channel blockers, diltiazem and verapamil, are contra-indicated in patients with left-ventricular dysfunction because they may precipitate heart failure. If a beta-blocker or a calcium-channel blocker alone fails to control symptoms adequately, a combination of a beta-blocker and a dihydropyridine calcium-channel blocker (e.g. amlodipine, felodipine, modified-release nifedipine) should be used; if this combination is not appropriate due to intolerance of, or contra-indication to, *either* beta-blockers *or* calcium-channel blockers, addition of a long-acting **nitrate** (section 2.6.1), **ivabradine**, **nicorandil**, or **ranolazine** (section 2.6.3) can be considered.

For those patients in whom both beta-blockers *and* calcium-channel blockers are not tolerated or are contra-indicated, monotherapy with a long-acting nitrate, ivabradine, nicorandil, or ranolazine should be considered.

Response to treatment should be assessed every 2–4 weeks after initiating or changing drug therapy; the drug should be titrated (according to symptom control) to the maximum tolerated dose. Consider referring the patient to a specialist if a combination of two drugs fails to control symptoms. Addition of a third antianginal drug should only be considered if symptom control is not achieved with two drugs and the patient is either due to undergo a revascularisation procedure, or a revascularisation procedure is considered inappropriate. See section 2.9 for the use of antiplatelet drugs in patients undergoing coronary stenting.

For long-term prevention of cardiovascular events, see Prevention of cardiovascular events, p. 163.

Acute coronary syndromes

Acute coronary syndromes encompass a spectrum of conditions which include unstable angina, and myocardial infarction with or without ST-segment elevation. Patients with different acute coronary syndromes may present similarly; definitive diagnosis is made on the basis of clinical presentation, ECG changes, and measurement of biochemical cardiac markers.

Unstable angina and non-ST-segment elevation myocardial infarction (NSTEMI) are related acute coronary syndromes that fall between the classifications of stable angina and ST-segment elevation myocardial infarction (STEMI). They usually occur as a result of atheromatous plaque rupture, and are often characterised by stable angina that suddenly worsens, recurring or prolonged angina at rest, or new onset of severe angina. Patients with unstable angina have no evidence of myocardial necrosis, whereas in NSTEMI, myocardial necrosis (less significant than with STEMI) will be evident. There is a risk of progression to STEMI or sudden death, particularly in patients who experience pain at rest.

ST-segment elevation myocardial infarction (STEMI) is an acute coronary syndrome where atheromatous plaque rupture leads to thrombosis and myocardial ischaemia, with irreversible necrosis of the heart muscle, often leading to long-term complications. STEMI can also occasionally occur as a result of coronary spasm or embolism, arteritis, spontaneous thrombosis, or sudden severe elevation in blood pressure.

Management of unstable angina and non-ST-segment elevation myocardial infarction (NSTEMI)

These conditions are managed similarly; the aims of management are to provide supportive care and pain relief during the acute attack and to prevent further cardiac events and death. For advice on the management of patients with acute ST-segment elevation myocardial infarction (STEMI), see below.

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Prasugrel, in combination with aspirin, is licensed for the prevention of atherothrombotic events in patients with acute coronary syndrome undergoing percutaneous coronary intervention (section 2.10.1); the combination is usually given for up to 12 months.

The *Scottish Medicines Consortium* (p. 4) has advised (August 2009) that prasugrel (*Efient*®), in combination with aspirin, be accepted for restricted use within NHS Scotland for the prevention of atherothrombotic events in patients with acute coronary syndrome undergoing percutaneous coronary intervention who are eligible to receive the 10 mg dose of prasugrel.

Antiplatelet drugs and coronary stents Patients selected for percutaneous coronary intervention, with the placement of a coronary stent, will require dual antiplatelet therapy with aspirin and either clopidogrel, prasugrel, or ticagrelor. Aspirin therapy should continue indefinitely. Clopidogrel is recommended for 1 month following elective percutaneous coronary intervention with placement of a bare-metal stent, and for 12 months if percutaneous coronary intervention with placement of a bare-metal stent was for an acute coronary syndrome; clopidogrel should be given for 12 months following placement of a drug-eluting stent. Clopidogrel should not be discontinued prematurely in patients with a drug-eluting stent—there is an increased risk of stent