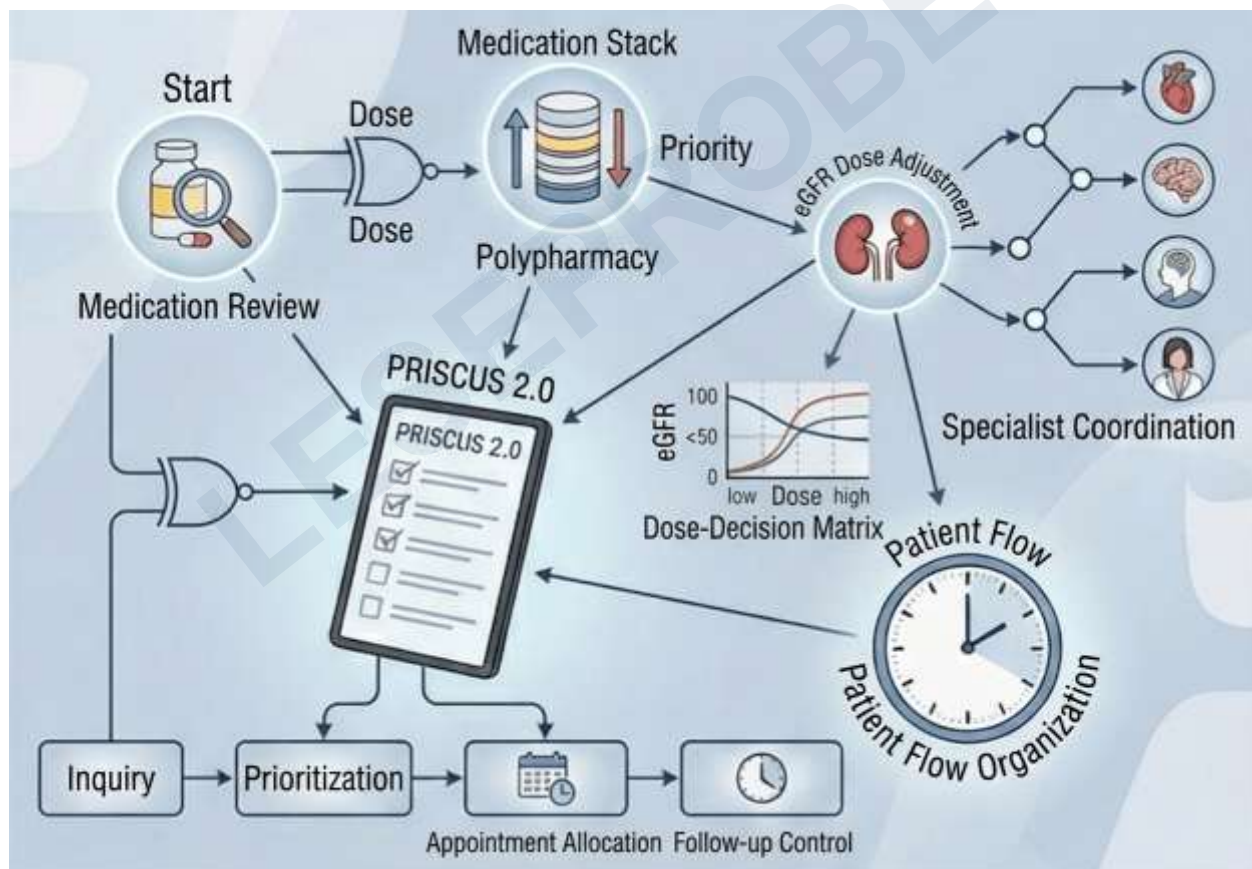


ClinicalOS – Structured decision-making in general practice

Volume 4

Patient Management

Therapeutic Strategies for GP Practices



Fundamentals of Treatment | PRISCUS 2.0 Medication Review

Deprescribing | Aids | Coordination

About this sample

Volume 4 · Patient Management

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- **Chapter 2 · Medication Review**
- **Chapter 4 · Deprescribing**
- **Chapter 6 · Coordination with Specialist Doctors**

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Dr Götz Huber, MD

The Clinical Operating System of General Practice

Volume 4: Patient Management – Therapeutic Strategies for GP Practices

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This English edition is a translation of the original work written in German. The concept, structure, and core medical content of ClinicalOS were originally developed for German general practice and the German healthcare system, to provide practising GPs, trainee GPs, healthcare assistants (HCAs) and medical students with a structured, practice-oriented learning and reference resource. The content is based on current medical literature, guideline-based sources and practical experience in general practice.

During the linguistic adaptation, references to guidelines, clinical practices and regulatory frameworks in other English-speaking settings were taken into account and highlighted where relevant and feasible; in some areas, differences from German recommendations are also presented explicitly. However, the translation does not constitute a systematic adaptation of every medical, therapeutic or regulatory aspect to all English-speaking countries. Professional guidelines, marketing authorisations, approved dosages, prescribing procedures, reimbursement rules and regulatory requirements may vary between countries;

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Chapter 2: Medication Review	Brown-bag review methodology, 5-step review algorithm, PRISCUS check during the review, nationally standardised medication plan, shared decision-making, review checklist
Chapter 3: Polypharmacy and Prioritisation	Definition and epidemiology, prioritisation logic in multimorbidity, hierarchy of objectives, PRISCUS as a prioritisation aid, shared decision-making
Chapter 4: Deprescribing	Basic principles, PRISCUS-guided deprescribing by drug class, monitoring and re-start criteria, communication, discontinuation protocols
Chapter 5: Prescribing Medicines and Medical Aids	Medicines (Form 13), medical aids (Form 16), PRISCUS alternatives, inhaler technique, orthoses/bandages, compression therapy including DDx for chronic venous insufficiency (CVI)/lymphoedema/lipoe-dema, dietary advice, rehabilitation exercise
Chapter 6: Coordination with Specialist Doctors	Structured referral, handover and integration of findings, role matrix, interface issues, PSA screening as an example of coordination
Chapter 7A: Micronutrient Deficiencies & Hormone Replacement	Replacement regimens for vitamin D, B12, iron and magnesium; testosterone replacement; thyroid hormones as elective therapy; shared decision-making; dosage overview
Chapter 8: Prevention and Screening	Check-up 35, vaccination management, cancer screening, cardiovascular prevention, fall prevention, Geriatrics-25 diagnoses, risk-adapted management
Chapter 9: Clinical Emergency Management	Resuscitation algorithm, reversible causes (4H/HITS), emergency medicines, anaphylaxis, hypoglycaemia, seizures, foreign body aspiration, quick reference guide for ACS/stroke/asthma
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Chapter 14: Orthopaedic Complaints	Basic algorithm, red flags, minimal diagnostics/imaging, watchful waiting, natural course, communication, safety net

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⇒ **See also ‘Practice Annex (C)’ in Manual 4: Patient Management**

Introduction

Manual 4 forms the therapeutic backbone of the ClinicalOS series: whilst Manual 2 describes rational diagnosis, Manual 4 begins once the diagnosis has been established and addresses the questions of how to treat, prescribe, coordinate and monitor care. The 14 chapters follow the natural sequence of a GP's daily therapeutic practice: from the fundamentals of pharmacotherapy and PRISCUS 2.0 (Chapter 1), through medication reviews, polypharmacy and deprescribing (Chapters 2–4), to the prescribing of medicinal products and medical aids and coordination with specialists (Chapters 5–6).

A second focus is on topics that often fall between the cracks in day-to-day practice: micronutrient and hormone replacement therapy, prevention and screening, GP-related emergency management, and disease management programmes (Chapters 7A–10). The final chapters are devoted to psychosocial care, practice organisation and two of the most common yet least standardised reasons for consultation: non-specific and orthopaedic complaints (Chapters 11–14), supplemented by two in-depth annexes on rational watch-and-wait management.

This manual is accompanied by the ClinicalOS Bonus Annex: case-based in-depth chapters organised into eight thematic blocks (A–H) — ranging from ECG interpretation and lipid management, through the management of dizziness and psychotropic medication, to skin cancer screening and PCOS. The Bonus Annex is designed as a standalone, work-in-progress document and can be consulted independently of Manual 4 when a specific case requires in-depth practical guidance.

Info box

Nowadays, Patient Management does not end at the practice door. Digital tools — from video consultations and online booking to digital telephone assistance — are transforming the way patients contact the practice, book appointments and organise follow-up care.

Manual 4 primarily describes processes, roles and responsibilities in analogue and hybrid practice operations: telephone registration, appointment logistics, waiting lists, recall systems and workflow management within the team.

Where these processes are supported or replaced by digital solutions, Manual 5, 'Digital Tools & AI in GP practice', refers to specific technologies, implementation steps and security requirements — for example, for video consultations (Chapter 11a), digital appointment management (Chapter 11.3), documentation AI (Chapter 6) or day-to-day data protection measures (Chapter 14.3).

For every organisational measure in Manual 4, one should therefore check whether Manual 5 describes a suitable digital tool that can map the same process more efficiently or securely. Manual 4 answers the question: 'How do we organise our patient flow?' — Manual 5 adds: 'Which digital tools do we use responsibly to achieve this?'

Chapter 2. Medication Review

Brown-bag method · 5-step algorithm · PRISCUS check · Review triggers · Documentation

The medication review is not an additional service, but a safety routine in GP practice. It serves to compare the actual medication with the documented medication, identify unnecessary risks and realign treatment with benefits, tolerability and the patient's goals.

The review is particularly important for older people, following hospitalisation, in the event of new symptoms without a clear diagnosis, and whenever five or more medicines are being taken simultaneously. The aim is not to reduce medication across the board, but to reassess the justification for each substance: does it still have a valid indication, is the dose appropriate, are there any interactions, does it pose problems in older people, and is it actually being taken as intended?

2.1 Brown-bag review: methodology

The Brown-Bag method is a structured technique for mapping a patient's actual medication use. It bridges the gap between the theoretical medication plan and what the patient is actually taking.

Core principle: The patient brings all their medicines with them

The patient is asked to bring all their medicines in a bag or a 'brown bag'. This includes:

- Prescription medicines (with and without a prescription)
- Over-the-counter medicines (OTC preparations)
- Dietary supplements and vitamins
- Herbal medicines and natural products
- Old or no longer required medicines

This physical collection prevents errors arising from memory and immediately highlights discrepancies between the prescription and the actual situation.

Systematic recording (medication checklist)

The following information is recorded for each medicine:

Parameter	Meaning	Example	Documentation
Substance	Active ingredient name + dosage	Metoprolol 50 mg	In medication plan
Indication	What was the medicine prescribed for?	High blood pressure, heart rate control	If unclear: ask
Prescriber	Who prescribed it?	GP, cardiologist, pharmacist	Important for follow-up enquiries
Dosage	How much and how often?	Twice daily, 1 tablet	Check against prescription
Duration	Since when? For how long?	Continuously for 3 years	Enquire if unclear

Discrepancy check: prescribed vs. actually taken

Once the data has been recorded, three comparisons are carried out:

1. Medication plan vs. pharmacy database: Are there any prescribed medicines that are not in the bag? (Non-adherence or empty packs?)
2. Medication plan vs. patient's statement: Has the patient specified different dosages, frequencies or times?
3. Medication plan vs. home medicine cabinet: Have old medicines been 'discontinued' but are still present? Are generic and brand-name versions being taken in parallel?

Tip: The 'Brown-Bag' method is particularly valuable for older patients (>75 years), following hospitalisation, or for patients on polypharmacy (≥10 medicines).

2.2 The 5-step review algorithm

The review follows a standardised algorithm comprising five sequential steps. Each step answers a key question and leads to defined actions.

Table 2.2: The 5-step review algorithm

Step	Question	Tool	Red Flag	Action	Risk
1	Is the indication still present?	Current diagnosis, clinical findings, laboratory results	Medication without a documented diagnosis; outdated indication	Document or discontinue	ADR with no benefit
2	Is the dose appropriate?	eGFR, age, body weight, liver function, interactions	Standard dose for eGFR <30 or age >85; overdose/underdose	Dose adjustment or substitution	Toxicity or treatment failure
3	PIM screening (PRISCUS)?	PRISCUS 2.0, PRISCUS Register (Q30), deprescribing guidelines	Medication on the positive list; alternative available	Switch to alternative or monitoring strategy	Falls, cognition, ADRs
4	Interactions?	Red-FinalMed, QT risk check, CYP3A4/2D6 inhibitors	Severe WW (red), QTc >470 ms + high QT risk, serotonin syndrome	Discontinuation or increased monitoring	Treatment failure, ADR
5	Adherence?	Patient consultation, pill organiser check, pharmacy enquiry	Patient not taking medication; comprehension issue; side effects	Training, simplification or change	Treatment failure; hospital admission

Sample review protocol: 5 medicines reviewed

Patient: Mr K., aged 82, eGFR 48 ml/min, weight 72 kg, mild cognitive impairment

Medication	Step 1: Indication?	Step 2: Is the dose correct?	Step 3: PRISCUS?	Step 4: WW?	Step 5: Adherence?	Result	Action
Metoprolol 50 mg twice daily	Yes (hypertension, history of myocardial infarction)	Yes (eGFR normal)	No	No	Yes, regularly	OK	Continue
Amitriptyline 10 mg in the evening	Unclear (previous indication?)	Too high given age and cognitive function	Yes, PIM list	+Metoprolol OK	Sporadic, forgetfulness	Problem	Switch to mirtazapine 7.5 mg
Diclofenac 75 mg once daily	Yes (chronic pain)	No, eGFR <50 → risk	Yes, PIM	Yes, risk of gastrointestinal bleeding + metoprolol	Yes, daily	Multiple risks	Discontinue; opioid or paracetamol?
Omeprazole 20 mg once daily	Yes (gastric protection with diclofenac)	Standard OK	No	Yes, reduces Mg+Ca absorption	Yes, regularly	OK (temporarily)	Discontinue after stopping Diclo
Atorvastatin 20 mg once daily	Yes (following MI, LDL >100)	Yes (eGFR OK)	No	No	Yes, regularly	OK	Continue treatment, monitor liver function

Key learning point: In this example, two issues were identified (amitriptyline, diclofenac) which led to action being taken. The review prevented potential falls, cognitive decline and gastrointestinal bleeding.

2.3 Event-driven review triggers

A review is not only indicated on a regular basis, but should be carried out immediately when certain triggers occur. These 12 triggers indicate an increased medication risk.

Table 2.3: 12 triggers for an immediate medication review

#	Trigger	Clinical scenario	Common causes	Action
1	Fall	Patient falls or is at risk of falling (Timed Up & Go >15 s)	Sedatives, antihypertensives, orthostatic hypotension	Check all sedative substances
2	New symptoms without a new diagnosis	Feeling of weakness, dizziness, headache, confusion without any apparent cause	Side effect of medication or overdose	Check the list of medications; note the time when symptoms first appeared

#	Trigger	Clinical scenario	Common causes	Action
3	Discharge from hospital	Patient returns from inpatient treatment	Discrepancy between discharge medication and regular medication; new medicines added	Carry out a 'brown-bag' check with new and old medication
4	Decline in eGFR >10 ml/min	Renal function decreases by ≥ 10 ml/min/1.73 m ² within 6–12 months	Many medicines require dose adjustment if eGFR is <60 or <30	Review all medicines; reduce the dose or switch to an alternative if necessary
5	Electrolyte imbalance	Sodium <135 or >145 mEq/L; potassium <3.5 or >5.5 mEq/L	ACE inhibitors/ARBs, diuretics, NSAIDs, trimethoprim	Review medications that affect K ⁺ or Na ⁺ ; increase monitoring frequency
6	New QTc >470 ms	ECG shows QTc prolongation or new arrhythmias	High QT risk: antipsychotics, some antidepressants, macrolides, azoles	Switch to alternative medication; if not possible: monitor closely and reduce dosage
7	≥ 10 substances	Patient is taking 10 or more medicines concurrently	Polypharmacy increases the risk of drug interactions and adverse drug reactions (ADRs) exponentially	Systematic review of all 5 steps; prioritise deprescribing
8	New prescriber	A specialist (cardiologist, psychiatrist, neurologist) has added new medicines	No coordination with GP; duplication or failure to check for interactions	Synchronise the medication plan; consult with all prescribers
9	Bleeding episode	Spontaneous bleeding (epistaxis, melena, haematuria) or INR >4	Anticoagulants (OAC, warfarin), antiplatelet agents, NSAIDs, corticosteroids	Check INR; consider reducing the dose or switching to an alternative
10	Cognitive decline	New-onset confusion, memory problems or delirium	Anticholinergics, benzodiazepines, tricyclic antidepressants, opioids	Review all medicines that act on the CNS; consider deprescribing
11	Weight loss >5% in 3 months	Unintentional weight loss may indicate loss of appetite or nausea	Metformin, digitalis glycosides, liraglutide, certain antidepressants	Assess nutritional status; adjust or switch medication if necessary
12	Treatment failure	HbA1c rises despite antidiabetic medication; BP remains uncontrolled despite ACE inhibitors; symptoms do not improve	Non-adherence, underdosing, incorrect choice of medication or interactions	Check adherence; increase dose or change medication according to the algorithm

Key point: A structured medication review **MUST** be carried out for each of these 12 triggers. The triggers are warning signs that the current medication is not optimal.

2.4 PRISCUS check during the review

The PRISCUS register is a compendium of medicines that are problematic in older people (Potentially Inappropriate Medication – PIM), maintained by the German Society for Geriatrics. A comparison against this register is a mandatory task in every review.

Workflow: PRISCUS integration

Step 1: Compile the medication list (Brown-Bag)

Step 2: Check each active ingredient against the PRISCUS register (or use the PRISCUS Q30 tool)

Step 3: If a PIM is identified: search for an alternative from the positive list

Step 4: Determine the switching strategy (immediate replacement or gradual tapering?)

Step 5: Define monitoring (laboratory parameters, clinical signs, timing of follow-up review)

The 5 most common PIM findings in the Brown-Bag and their alternatives

PIM (Problematic)	Reason	Alternative	Rationale for change	Monitoring	Level
PPI (e.g. omeprazole)	Long-term: risk of fracture, hypomagnesaemia, C. difficile	H2 blockers or sucralfate; discontinue if no indication exists	Gradual reduction over 2–4 weeks	Mg, Ca, bases monthly; clinical symptoms	B
Diazepam (benzodiazepine)	Sedation, risk of falls, cognitive impairment, dependence	Mirtazapine 7.5–15 mg (for sleep); taper off Z-drugs	Gradual tapering: -25% every 2 weeks	Monitor for rebound anxiety; sleep quality	A
Amitriptyline (tricyclic)	Anticholinergic effects, sedation, falls, cardiac arrhythmias	Mirtazapine 7.5–15 mg or sertraline 50 mg	Switchover: -50% of old drug, +50% of new drug over 1 week	Mood, sleep, ECG	A
Diclofenac (NSAID)	Renal impairment (eGFR <60), gastrointestinal bleeding, cardiovascular	Paracetamol 3–4 times daily or a weak opioid; physiotherapy	Discontinue immediately (eGFR <50) or switch to paracetamol 1 g 4 times a day	eGFR, bleeding, analgesic effect	B
Glimepiride (sulphonylurea)	Risk of hyperglycaemia, falls, weight gain	Metformin or SGLT2 inhibitor (even with moderate HbA1c)	Taper off slowly over 2–4 weeks; monitor blood glucose daily	HbA1c after 3 months, falls, weight	B

PRISCUS Level A: Avoid – clear evidence of harm in older people.

PRISCUS Level B: Use with caution – carefully assess the risk-benefit balance.

PRISCUS Level C: Dose reduction required if eGFR <60 or in the presence of specific medical conditions.

2.5 Documentation and communication

A review without documentation is a waste of time. Documentation must be structured, complete and tailored to the patient.

Nationally standardised medication plan

A medication plan is mandatory for patients taking ≥ 5 medicines. The document contains:

- All current medications (including dosage and times of administration)
- Allergies and intolerances
- A brief indication for each medication
- Pharmacy stamp

Review documentation (structured format)

Each review should include the following points:

Element	Content
Date, time	E.g. 10 April 2026, 2.30 pm
Reason	Routine review, trigger (which one?), discharge from hospital, contact with specialist, etc.
Patient factors	Age, eGFR, liver function (Child-Pugh), weight, cognition, mobility
Medication list (current)	For each medication: active ingredient, dose, indication, prescriber, duration
Review findings	For each step of the algorithm: Yes/No; if No: identify the problem
Interventions	Discontinuation, dose reduction, substitution (with justification), additional monitoring
Follow-up date	When should a follow-up review take place? When should laboratory tests be carried out? When should the pharmacist be consulted?

Communication with the patient: shared decision-making

The most important element is the discussion with the patient. When deciding to stop or switch medication:

1. Explain the issue: "This medicine is problematic at your age because..."
2. Offer an alternative: "Instead, I suggest..."
3. Describe potential benefits: "This could reduce your falls and improve your memory..."
4. Seek consent: "Does that sound right to you? Do you have any concerns?"
5. Document the agreement: Note in the care plan that the patient has been informed and has given their consent.

2.6 Review checklist (Appendix)

This one-page checklist can be printed out as a template and used during the review:

	Step	Checklist
☐	Brown-bag consultation carried out	Has the patient brought all their medicines with them: prescribed, OTC, dietary supplements, old stock?
☐	Step 1: Indication?	Every medicine has an active, documented indication. If unclear: ask or discontinue.
☐	Step 2: Is the dose OK?	Has eGFR been checked? Has age >75 been taken into account? Has weight been taken into account? Have maximum daily doses been adhered to?
☐	Step 3: PRISCUS?	Have all medicines been checked against the PRISCUS register (Q30)? Have PIMs been identified and alternatives sought?
☐	Step 4: Interactions?	Has the Red-FinalMed check been carried out? Has the QT risk been assessed? Have serious drug-drug interactions been identified?
☐	Step 5: Adherence?	Does the patient understand the dosing regimen? Are there any problems with adherence? Have any side effects been reported?
☐	Triggers assessed	Is there a review trigger? (Fall, new symptom, discharge, electrolytes, QTc, ≥10 medicines, new prescriber, bleeding, cognitive function, weight, treatment failure)
☐	Measures defined	Have all planned changes been listed, discussed with the patient and documented?
☐	Follow-up date set	When is the follow-up review? When are the laboratory checks? Has consultation with the pharmacy been arranged?
☐	Medication plan updated	New plan printed, pharmacy stamp applied, patient receives a copy?

This checklist should be filed in the patient's records or saved digitally.

Cross-references

- Volume 4, Chapter 1: Fundamentals of Pharmacotherapy – Dose adjustment in renal impairment
- Volume 4, Chapter 3: Management of polypharmacy – Deprescribing techniques
- Volume 2, Diagnostic Principles – Laboratory parameters for dose adjustment (eGFR, INR, QTc)
- PRISCUS Register 2.0: www.priscus.net
- Red-FinalMed: www.redfinalmed.de
- National Standardised Medication Plan: www.bundesaerztekammer.de

Chapter 4. Deprescribing

Basic principles · PRISCUS discontinuation protocols · Monitoring · Communication · Criteria for restarting medication

Deprescribing is the active, controlled reduction or discontinuation of a medication whose benefits no longer outweigh the risks, burden or treatment objectives. It is not under-treatment, but rather part of good long-term GP care.

Safe deprescribing always follows the same logic: Why should the medication be discontinued, how is it discontinued, what is monitored, when is it reassessed, and under what conditions is treatment resumed? Without these five questions, discontinuation remains haphazard; with them, it becomes a structured management process.

4.1 Basic principles of deprescribing

Deprescribing is the systematic reduction or discontinuation of medicines whose benefits are questionable or minimal in a given situation.

When to discontinue? When not to?

Discontinuation is appropriate if:

- The indication no longer applies (e.g. statins following a physical activity test with a good result)
- The risks outweigh the benefits (e.g. benzodiazepines in older people with a history of falls)
- Symptomatic side effects are present (e.g. headache caused by amlodipine)
- The prognosis has deteriorated so dramatically that long-term prevention is no longer necessary
- Reducing polypharmacy is in the patient's best interests (e.g. fewer tablets = better adherence)

Do not discontinue if:

- Medicines relevant to the prognosis are being taken for a clear indication (e.g. ACE inhibitors following a myocardial infarction)
- There is a risk of acute withdrawal (e.g. abrupt discontinuation of benzodiazepines or antidepressants)
- The patient is strongly opposed: respect their autonomy

Contraindications for abrupt discontinuation

Caution – Rebound effects following abrupt discontinuation:

- Benzodiazepines: rebound anxiety, seizures (rare, but serious)
- Beta-blockers: tachycardia, hypertensive crisis, angina (VERY common)
- Clonidine: hypertensive crisis (life-threatening!)
- Antidepressants: withdrawal syndrome (headache, nausea, anxiety)
- Corticosteroids: Adrenal insufficiency (if taken for >2 weeks, >equivalent to 10 mg prednisolone)

Rule of thumb: If withdrawal syndrome occurs, the medication must be tapered off. Gradually, not abruptly!

4.2 PRISCUS-guided deprescribing (KEY CHAPTER)

The PRISCUS list comprises 13 categories of medication for which tapering protocols have been empirically evaluated. The most important categories, with specific tapering plans, are as follows:

Category 1: Benzodiazepines and Z-drugs

Problem category: Risk of falls, cognitive impairment, potential for dependency

Withdrawal protocol: Gradual reduction over 4–12 weeks (never abruptly!)

- Weeks 1–2: Reduce the dose by 10–15%
- Weeks 3–4: Further reduction of 10–15%
- Weeks 5–8: A further 10–15% every 1–2 weeks
- Weeks 9–12: Final reduction to zero

Example: Diazepam 5 mg 1-0-1 (10 mg daily):

Step	Week	New dose	Reduction	Monitoring
Start	1	Diazepam 5 mg 1-0-0 + 2.5 mg 0-0-1	-25%	Sleep, anxiety?
Step 1	3	Diazepam 2.5 mg 1-0-0 + 2.5 mg 0-0-1	-50%	How are you feeling?
Step 2	5	Diazepam 2.5 mg 0-0-1 alone	-75%	Rebound anxiety?
Step 3	7	Stop	-100%	Check-up after 1 week

Category 2: Proton pump inhibitors (PPIs)

Problem categories: Osteoporosis (with long-term use), magnesium deficiency, risk of *Clostridium difficile*, possible cardiovascular effects

Withdrawal protocol:

- Weeks 1–8: Continued standard dose
- Week 9: Switch to on-demand therapy (“only when symptoms occur”)
- Week 10+: Carry out an *H. pylori* test (if not done recently)
- Discontinue only if *H. pylori*-negative and no reflux symptoms

Alternative if withdrawal is difficult: switch to an H2 blocker (famotidine) with a slower tapering-off schedule.

Category 3: TCA-type antidepressants (imipramine, amitriptyline)

Problem categories: Anticholinergic side effects, falls, confusion, QT prolongation

Withdrawal protocol:

Step 1: Review the indication

→ Is the depression resolved? Has the neuropathic pain resolved? Is sleep stable?

Step 2: Switch to an SSRI (e.g. imipramine 75 mg → sertraline 50 mg) OR gradual reduction

→ If switching: take care to avoid overlapping doses (serotonin syndrome)

→ If reducing directly: 25–30% every 2–4 weeks

Step 3: Once reduced to 25 mg imipramine or equivalent, then taper off gradually

Category 4: Antihypertensives (clonidine, doxazosin)

Problem category: Caution – rebound hypertension, tachycardia, risk of myocardial infarction with clonidine (very critical!)

Withdrawal protocol – Clonidine (LIFE-THREATENING if stopped abruptly!):

- NEVER stop treatment abruptly
- Weeks 1–2: Reduce the dose by 50% (e.g. 0.15 mg daily → 0.075 mg daily)
- Weeks 3–4: Reduce the remaining dose by 50% (e.g. 0.075 mg → 0.0375 mg)
- Week 5: Stop completely
- Throughout the entire withdrawal phase: Measure BP daily; advise patients (headaches and nervousness are normal!)

Withdrawal protocol – Doxazosin:

- Less critical than clonidine, but there is still a risk of rebound
- 25–30% reduction every 2 weeks
- Final check-up after complete discontinuation

Category 5: Antidiabetic agents (sulphonylureas)

Problem category: Risk of hypoglycaemia, particularly in older people with reduced kidney function

Withdrawal protocol for sulphonylureas (e.g. gliclazide):

Step 1: Switch to a DPP-4 inhibitor (e.g. linagliptin) or, if necessary, insulin mimetics

Step 2: Reduce the SU dose by 50 per cent; start concurrent administration of the DPP-4 inhibitor

Step 3: After 1–2 weeks: Discontinue SU completely; continue DPP-4 inhibitor alone

Monitoring: Check blood glucose levels at least daily during the switch (risk of hypoglycaemia or hyperglycaemia)

Category 6: Anticholinergics (oxybutynin, trospium)

Problem categories: confusion, memory impairment, worsening of glaucoma, risk of falls

Withdrawal protocol:

Step 1: Review the indication (is urge incontinence still present?)

Step 2: Switch to mirabegron (less anticholinergic) or discontinue immediately

Step 3: If discontinuing immediately: 50% reduction per week over 2–3 weeks

Step 4: After discontinuation: monitor for a reduction in cognitive symptoms (may take 2–4 weeks)

4.3 Monitoring following a withdrawal attempt

Structured monitoring is required after each withdrawal attempt:

After 1 week:

- Telephone contact or visit to the surgery
- Check: Headache? Sleep disturbance? Anxiety? High blood pressure? Hypoglycaemia?
- Measure vital signs (particularly BP for clonidine/beta-blockers, blood glucose for antidiabetic medicines)
- Document: "Withdrawal attempt tolerated yes/no"

After 4 weeks:

- Second contact: Has the adjustment period been completed?
- Laboratory tests (if relevant: HbA1c, creatinine, electrolytes)
- Decision: Do we continue with withdrawal, or restart the medication?

After 12 weeks:

- Final assessment: Was the weaning attempt successful?
- Documentation for the next review

Re-start criteria (when should the medication be resumed?)

Worsening of symptoms: The patient suddenly began suffering from severe insomnia again (benzodiazepine) → restart

Clinical deterioration: Second stroke following discontinuation of aspirin → restart

Patient reports unbearable symptoms: "I can't stand this" → Respect the patient's wishes, consider restarting

4.4 Communication during deprescribing

The way in which you communicate a deprescribing plan determines patient acceptance.

Language patterns: reframing rather than fear

Not: "I have to stop the statin because it's causing side effects."

But: "Your blood pressure and cholesterol levels are stable. I'd like to spare you from taking this medication."

Not: "This benzodiazepine dramatically increases your risk of falling."

But: "Many older people sleep better and are more alert during the day if we gradually taper off this sleeping pill. Shall we give it a try?"

Not: "The antibiotic was unnecessary."

But rather: "Your infection has cleared up. The antibiotic has done its job; we can stop taking it now."

Documentation for patient safety

Always document:

- Reason for attempting to discontinue treatment (e.g. 'indication no longer applies', 'benefit < risk', 'patient's request')
- Tapering protocol (gradual vs. abrupt)
- Planned monitoring
- Criteria for restarting

Example of documentation: "Attempt to discontinue the bisphosphonate alendronic acid: 79-year-old female patient, femoral neck T-score -1.2 (no longer osteoporotic after 5 years of treatment), no fractures. Plan: Withdrawal, follow-up at 3 and 12 months (DEXA scan). Resumption if >10% bone mass loss or new fracture."

4.5 Comprehensive tables: Tapering protocols by drug class

Table 4.5a: Benzodiazepines – dose reduction schedule (example: diazepam 10 mg daily)

Phase	Week	Dose	Total reduction	Monitoring	Success ?
Baseline	0	Diazepam 5 mg 1-0-1	0%	Current dose	—
Level 1	2	Diazepam 5 mg 1-0-0 + 2.5 mg 0-0-1	-25%	Sleep quality	Yes→+1 week
Stage 2	4	Diazepam 2.5 mg 1-0-0 + 2.5 mg 0-0-1	-50%	Anxiety, tremor?	Yes→+1 week
Level 3	6	Diazepam 2.5 mg 0-0-1 alone	-75%	Sleep stable?	Yes→+1 week
Stop	8	Discontinue	-100%	After 1W check	Success!

Table 4.5b: PPI – Tapering Protocol (Example: Omeprazole 20 mg daily for reflux)

Phase	Week	Dose/Frequency	Target	Monitoring	Success ?
Baseline	1–8	Omeprazole 20 mg daily	Symptom control	No symptoms	Yes
On-demand treatment	9	Omeprazole only as required (max. 3 times a week)	Weaning	Is reflux more frequent?	Yes→+2 weeks
H. pylori test	10	Serum test or breath test	Clarify indication	Negative?	Yes→Stop
Stop	12+	Complete discontinuation	No symptoms	Check-up after 4 weeks	Success!

Table 4.5c: Antihypertensives (clonidine) – CRITICAL PROTOCOL (NEVER ABRUPT!)

Phase	Week	Clonidine dose	Target BP	Monitoring	Emergency?
Baseline	0	0.15 mg daily	135/85 mmHg	Daily BP	No
Stage 1	1–2	0.075 mg daily (–50%)	<150/90	Twice daily BP	Headache?
Stage 2	3–4	0.0375 mg daily (–75%)	<150/90	2x daily BP	Feeling nervous?
Stop	5	Discontinue	<160/100 or hypertensive emergency?	DAILY BP!	YES: Hospitalisation!

4.6 Cross-references in this documentation

- → Chapter 3 (polypharmacy): Prioritisation criteria for deciding which medicines are suitable
- → Chapter 2 (Medication review): Brown-bag assessment prior to deprescribing planning
- → E0-PRISCUS Register: Complete list of the 13 classes of medicines
- → Volume 2: Diagnostic principles for reviewing indications

Chapter 6. Coordination with Specialist Doctors

6.1 Structured Referral

Content and structure of a high-quality referral:

1. Clearly formulate the clinical question
2. Include current findings (laboratory tests, ECG, imaging)
3. Provide a complete list of current medication
4. Document any allergies and intolerances
5. Contact details available for enquiries

Benefit: Reduces duplicate diagnostic tests, improves specialists' efficiency, ensures continuity of care.

6.2 Referral back and integration of findings

Specialist's referral → GP's decision:

The GP bears responsibility for the overall course of treatment → must weigh up the options critically even when a specialist has made a recommendation

Document findings and treatment recommendations in a structured manner in the patient's medical record

Check specialist prescriptions for contraindications, interactions and PIM risk

6.3 Shared responsibility – role matrix

Example: Who does what in four specialist areas:

Specialist area	Initial assessment	Follow-up (GP)	Referral (specialist)
Cardiology	New HF diagnosis → Cardiology	Diuretic dosage, hypertension follow-up	Decompensation, AFib, arrhythmias
Diabetology	Type 2 diabetes mellitus (T2DM) + HbA1c >8% → Diabetology	Metformin, lifestyle, monitoring	Initiation of insulin, diabetic ketoacidosis, nephropathy
Psychiatry	New-onset depression, psychosis → Psychiatry	SSRI dosage, adherence, treatment goals	Suicidal ideation, schizophrenia, withdrawal mania
Urology	New-onset benign prostatic hyperplasia → Uro	LUTS symptom score, tamsulosin dose	Tamsulosin failure, retention, malignancy

6.4 Interface issues and solutions

Common problems with multiple prescriptions:

Problem: Duplicate prescriptions (e.g. beta-blockers prescribed by both the cardiologist and GP)

Solution: Cross-check medication lists, communicate duplicate dosages

Problem: Loss of information upon discharge or during a visit to a specialist

Solution: Structured discharge letters, electronic consultation system

Problem: Risk of drug interactions (PIM) due to uncritical adoption of specialist prescriptions

Solution: PRISCUS check before adopting a prescription, time for discussion with the patient

6.5 PSA screening as a model for coordination

PSA shared decision-making demonstrates coordinated decision-making:

GP initiates the discussion: "The urologist has offered a PSA test – would that be appropriate for you?"

Patient: Informed decision-making process (benefits, overdiagnosis, overtreatment)

GP: Final decision made within the patient's context (life expectancy, comorbidities)

Urologist: Technical expert, not a 'routine screening prescriber'

Reference: Uro-Tool (PSA screening chapter) – indications and decision-making aids

Cross-references

- Interface management → B4-6.1, B4-6.2
- PRISCUS check on transfer → B4-3
- PSA shared decision-making → Uro-Tool (Chapter 4)
- Discharge management → B4-1 Continuity

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