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Meeting of the: Quality & Performance Committee
Summary sheet

Date of meeting: 30/04/2019
For: Public session (Part 1)
For: Decision

Agenda item and title:	Polypharmacy Guidelines
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Executive summary:
• Multi-morbidity and polypharmacy guidelines have been produced to support GPs and clinicians in addressing problematic polypharmacy. The documents provide GPs and other clinicians with a number of ways to identify people with polypharmacy, with or without multi-morbidity, who may be suitable for review.

Recommendations and specific action the Governing Body needs to take at the meeting?	
1.	To approve and adopt guidelines for use by the Medicines Optimisation team across Cornwall
2.	
3.	

Evidence in support of arguments:	Reproduced and revised following NICE multi-morbidity (2016) guidelines	
Who has been involved/contributed:	Medicine Optimisation Team Pharmacists	
Cross reference to strategic objectives:	To turn around performance	☒
	Financial recovery	☒
	Continue our own organisational recovery	☐
	Achieve agreed milestones for the STP/SoF	☐
Engagement and involvement:	Engagement with GP practice and Localities	
Communications	Via GP Leads and available on Joint Formulary	

issues:	
Financial implications:	Cost savings resulting from deprescribing, and reduction of harms/admissions related to medication incidents
Review arrangements:	Due for review June 2020
Risk management:	No risks-guidance is about reducing risks of inappropriate polypharmacy and supporting deprescribing
National policy/ legislation:	NICE Multi-morbidity Guidelines 2016
Public health implications:	Improved morbidity due to the reduced number of medication harms
Equality and Diversity:	N/A
Other external assessment:	N/A
Relevant conflicts of interest:	None

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FOI consideration – Exemption*	**Qualified /absolute***
None - item may be published	None - item may be published
If exemption is qualified then public interest test required. Check to see if the public interest in the information being released outweighs the exemption being used and record your consideration here to justify inclusion on the private and confidential agenda. Note the Information Commissioner states that there is a general public interest in transparency. For advice, contact KCCG.FOI@nhs.net	

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Polypharmacy Guidelines

Date Approved by MOPB: 15 Mar 2019

Date adopted by NHS Kernow: 30 April 2019

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Document control sheet

Title of document:	Polypharmacy Guidelines
Originating Directorate:	Primary Care
Originating team:	Medicines Optimisation
Document type:	Guidelines
Subject category:	Medicines Optimisation
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Date ratified:	November 2018
Ratified by:	Medicines Optimisation Prescribing Board
Review frequency:	Three years
Expiry date:	March 2022
Target audience:	All staff
Can this policy be released under FOI?	Yes
	Give reasons for exemption if no:
	N/A

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Contents

1. Aims

- To continue to support GP practices in addressing problematic polypharmacy.
- To provide an update on previous documents issued by NHS Kernow, taking into account the latest evidence and guidance.
- To provide GP practices with a number of ways to identify people with polypharmacy, with or without multi-morbidity, who may be suitable for review.
- To provide information on key focus areas when undertaking reviews.

2. Background

Polypharmacy is generally understood to refer to the use of multiple medications by an individual. Amongst the drivers for polypharmacy is the growth of an aging (and increasingly frail) population, and by the increasing prevalence of multi-morbidity. However, it is important to recognise that it can also affect a wider group of people including children and young people, those from deprived backgrounds, people with mental health problems and those with learning difficulties (The Royal Pharmaceutical Society, 2018).

Specialist national guidelines, including those from the National Institute for Health and Care Excellence (NICE) have historically been very much disease-specific and whilst the principles guide good practice in one condition, they can often be less helpful in people with multi-morbidity. The publication of the NICE Clinical Guideline 'Multi-morbidity: Clinical Assessment and Management' (NICE, 2016) has been a significant step forward. The principles of the approach to care for people with multi-morbidity described in the guideline involve "improving quality of life by reducing treatment burden, adverse events, and unplanned care." It also advises healthcare professionals to "review medicines and other treatments taking into account evidence of likely benefits and harms for the individual and outcomes important to the person."

Whilst polypharmacy can be beneficial to some individuals (appropriate polypharmacy) and is advocated by clinical guidelines, it can also be potentially harmful where medicines are used inappropriately or their benefit is not realised (problematic or inappropriate polypharmacy) (The King's Fund, 2013). The potential for drug interactions and adverse drug reactions (ADRs) rises and given that 5% of emergency hospital admissions are due to ADRs (Pirmohamed, et al., 2004), this is a factor worth considering when prescribing. In addition, the need to take more prescribed medicines can become an increasing burden which can have a negative impact on an individual's quality of life.

Whilst there are concerns over the taking of multiple medicines, there are also concerns over medicines that are not taken. It is thought that between a third and a half of all medicines prescribed for long-term conditions are not taken as prescribed

(NICE, 2009). This not only has implications for a person's health outcomes, but also for the prescribing budgets. It is estimated that every year more than £300 million of medicines are wasted of which £150 million is avoidable. In Cornwall alone, previous waste campaigns reveal that wastage is of the order of £2-3 million per year. Multi-morbidity, polypharmacy and waste are closely interlinked. Identifying and reviewing persons with multi-morbidity on polypharmacy provides an opportunity to improve patient care, reduce waste and make cost savings.

The World Health Organisation (WHO) has described polypharmacy as a major global problem, saying "irrational use of medicines is a major problem worldwide" (WHO, 2017). WHO estimates that more than half of all medicines are prescribed, dispensed or sold inappropriately, and that half of all individuals fail to take them correctly (WHO, 2017). In its third Global Health Challenge, 'Medication Without Harm', launched in March 2017, WHO aims to reduce severe avoidable medication-related harm by 50% globally in the next five years (WHO, 2017). WHO has identified three priority target areas to protect people from harm, namely (WHO, 2017):

- High-risk situations
- Polypharmacy
- Transitions of care

The actions planned in this Global Challenge are based on four domains of work, one for each fundamental problem identified. These are (WHO, 2017):

- People taking medicines and the public
- Medicines
- Healthcare professionals, and
- Systems and practices of medication.

The solutions to polypharmacy are complex and multifaceted, but will not bring about the desired change if healthcare professionals fail to engage people much more in their medicines taking (The Royal Pharmaceutical Society, 2018). Shared decision making around which medicines are most appropriate for that individual is vital to reducing problematic polypharmacy and the potential harm from it (The Royal Pharmaceutical Society, 2018). Holistic, structured medication reviews carried out by healthcare professionals who are competent to engage with people under their care in open and honest conversation about medicines will be key (The Royal Pharmaceutical Society, 2018).

3. Method – who to target?

There are a number of approaches which can be used to search for people with multi-morbidity and polypharmacy to identify those who may be suitable for a review. The most obvious will be looking at the number of medicines taken; however, in many cases polypharmacy is appropriate and it may be worth looking at specific

patient or medicine factors, which may make them more likely to be suffering with inappropriate polypharmacy.

The following methods are recommended:

3.1 Number of medicines prescribed

- Run a search to identify individuals prescribed agreed number (x or more) repeat medicines.
- The NICE Multi-morbidity guidance recommends identifying those individuals who are prescribed 15 or more regular medicines. A pragmatic approach may need to be taken depending on search results.

Or

- Run a search to identify those individuals prescribed between four and nine repeat medicines who also:
  - have at least one prescribing issue that meets criteria for inappropriate prescribing
  - have evidence of being at risk of a well-recognised interaction, or clinical contraindication
  - have evidence from clinical records of difficulties with medicines taking, including problems with adherence
  - have no or only one major diagnosis recorded in the clinical record are receiving end-of-life or palliative care (where this has been explicitly recognised).

3.2 Frailty

There is an increasing recognition that older age itself should not be a specific focus. Instead a more functional and individualised approach is recommended (Scottish Government and NHS Education for Scotland, 2018). Frailty is a long-term condition which can predate crisis by a decade or more (Bramley & Moody , 2016) and many people with frailty also have multi-morbidity. Tools are available which can be used to identify frailty. The electronic Frailty Index (or eFI) uses existing coded data from the electronic primary care record to identify frailty in people aged 65 years or over. The NICE guideline Multi-morbidity: clinical assessment and management (NICE, 2016) recommends considering use of the eFI, which is now freely available in SystmOne and EMIS and can be easily and accurately used to identify older people most likely to benefit from this tailored approach to care. Two other validated tools: the Predicting Emergency Admissions Over the Next Year (PEONY) score and Qadmissions® are also recommended to be considered if available.

Guidance on using eFI

Information for the eFI is collected using existing electronic health record information at no extra cost.

The eFI uses a 'cumulative deficit' model, which measures frailty on the basis of the accumulation of a range of deficits, which can be clinical signs (e.g. tremor), symptoms (e.g. vision problems), diseases, disabilities and abnormal test values.

The eFI is presented as a score (e.g. if nine deficits are present out of a possible total of 36, the FI score = 0.25). The eFI scores listed correlate to frailty categories:

Fit:	eFI score = 0-0.12
Mild frailty:	eFI score = 0.13-0.24
Moderate frailty:	eFI score = 0.25-0.36
Severe frailty:	eFI score = > 0.36

eFI scores for the whole practice population can be generated in one search. Dependant on the search results, a decision can be made on which cohort to review, e.g. those with an eFI over x.

3.3 Care home medication reviews

The importance and value of conducting medication reviews in care homes has been well established in Cornwall and the Isles of Scilly over the past few years. This important area of work remains a key focus.

Practices remain free to choose how to conduct medication reviews in individual care homes. However, experience to date indicates that the most value can be achieved through joint GP and pharmacist medication reviews, ideally at the home where Medicine Administration Record (MAR) charts can be checked and the individual (and family, carers, and nursing staff) consulted where possible.

As a specific focus, practices may wish to utilise pharmacist support to review people newly registered with the practice, who may have transferred from another care home, to reconcile prescribed medication.

3.4 Persons recently discharged from hospital – pharmacist-led medicines reconciliation

The risk of prescribing errors is increased when people transfer between care settings, especially following discharge from hospital back into primary care. Communication between the hospital and primary care can be delayed resulting in prescribing queries and potential harm.

GP practices may wish to utilise pharmacist support to review the medication of individuals recently discharged from hospital. The pharmacist may identify issues that warrant clarification from the hospital pharmacist or consultant and/or may wish to liaise with community pharmacist colleagues to conduct a Medication Use Review (MUR) and/or the New Medicines Service (NMS) intervention. It is acknowledged however that a subgroup of those most likely to benefit from a post-discharge MUR may be unable to benefit from the service as they are housebound and cannot get to

a community pharmacy (The Royal Pharmaceutical Society, 2012). In these instances, a domiciliary review from the pharmacist could be considered.

4. Key topics

There are a number of key areas which can be focused on when undertaking reviews on polypharmacy.

4.1 Hospital Admissions Relating to Medicines (HARMs)

Hospital Admissions Relating to Medicines (HARMs) has been the subject of much debate and study for many years. Research has demonstrated that individuals on multiple medicines are more likely to suffer ADRs, often leading to hospital admissions (Arden and Greater East Midlands Commissioning Support Unit, 2014). The following table lists medicines identified as 'high risk'. There should be a focus on these medicines when undertaking reviews; ensuring that their continued use is indicated, at an appropriate dose, and that no troublesome side effects are being experienced.

Table 1: High Risk Medicine

High Risk Medicine	Risks
Oral corticosteroids	Endocrine, Eye, GI, Immune, Musculoskeletal, CNS, Psychiatric , neurological
NSAIDS	GI Ulcer, Kidney Damage, CVS Risks (Diclofenac)
Opioid Analgesics	Drowsiness, Falls, Opioid Toxicity
Laxatives	Dehydration, Rebound Constipation
Hypnotics	Falls, CNS, Dependence, Withdrawal, Dementia
Antipsychotics	Increased Mortality in Dementia
PPIs	Clostridium difficile, Hypomagnesaemia, Bone Fracture
Hypoglycaemics (insulin or gliclazide)	Hypoglycaemia
Antihypertensives	Hypotension, Renal Impairment, Hypokalaemia/Hyperkalaemia
Aspirin and other antiplatelets	GI Bleed
Digoxin	Toxicity
Antiarrhythmics	Toxicity, Interactions
Anticoagulants	Bleeding or subtherapeutic

4.2 Acute Kidney Injury (AKI)

NHS England in partnership with the UK Renal Registry has launched a National AKI Prevention Programme 'Think Kidneys' **(NHS England and the UK Renal Registry, 2018)**, which will include the development of tools and interventions. A priority for the programme is the development and adoption of e-alert systems, based on the test result, which will proactively notify clinicians when AKI has been identified, supporting implementation of AKI NICE guidance **(NICE, 2013)**.

Sick day rules **(NHS England and the UK Renal Registry (2), 2018)**
Acute kidney injury is a medical emergency. Some people are at increased risk of AKI, for example, those with chronic kidney disease (CKD), heart failure, or those

taking particular medications, e.g. nephrotoxic potential (such as non-steroidal anti-inflammatory drugs (NSAIDs), aminoglycosides, angiotensin-converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs) and diuretics (NICE, 2014). Sick day rules regarding medication are to be discussed as part of routine CKD review.

Read the detailed referral criteria here **(NHS Kernow Clinical Commissioning Group (KCCG), 2018)**.

4.3 High risk drug combinations

The following drug combinations are highlighted within the All Wales Medicines Strategy Group (AWMSG) Polypharmacy: Guidance for Prescribing (AWMSG, 2014) as being particularly high-risk combinations and should be avoided where possible, and clearly justified when considered necessary. This list is NOT exhaustive, and the safety of other medicines has to be considered depending on individual circumstances.

4.3.1 Non-Steroidal Anti-inflammatory Drugs (NSAIDs)

- + ACE inhibitors or ARBs + diuretics – 'triple whammy'
- + estimated glomerular filtration rate (eGFR) < 60ml/min
- + diagnosis heart failure
- + Anticoagulants i.e. warfarin or direct oral anticoagulants (DOACs), e.g. dabigatran, apixaban, edoxaban, rivaroxaban
- + Age >75 without Proton Pomp Inhibitors (PPIs)

4.3.2 Anticoagulants

- + antiplatelet in frail individuals – risk is high and combination should be challenged
- + NSAIDs
- + Macrolide and quinolone antibiotics, metronidazole (if concomitant use is essential, ensure appropriate international normalized ratio (INR) monitoring)
- + Azole antifungals including miconazole oral gel (if essential, ensure appropriate INR monitoring)

4.3.3 Heart failure diagnosis

- + Thiazolidinediones (glitazones) e.g. pioglitazone
- + NSAIDs
- + tricyclic antidepressants (TCAs)

4.4 Anticholinergic load

Anticholinergics have long been linked to impaired cognition and falls risk, but (more recently) have also been linked to increased morbidity and mortality.
Anticholinergics may also be a cause of constipation and urinary retention (Scottish Government and NHS Education for Scotland, 2018).

Not all drugs with anticholinergic properties may individually increase risk of severe adverse effects. However, a wide range of commonly used drugs have anticholinergic properties and their effects may accumulate. A scale or table that lists the anticholinergic activity of commonly prescribed drugs can guide clinical decision-making to limit anticholinergic load. One such tool is the Anticholinergic Risk Scale (ARS), which was developed using 500 most prescribed medications. They ranked medication with anticholinergic potential on a scale of 0–3 (0. Limited or none; 1. Moderate; 2. Strong; 3. Very strong potential). The ARS has since been modified (subsequently referred to as Modified Anticholinergic Risk Scale (mARS): Table 2) to include newer medications with anticholinergic properties (Scottish Government and NHS Education for Scotland, 2018).

Individuals prescribed combinations of anticholinergic drugs should be reviewed considering the following:

- Minimise use of anticholinergics wherever possible.
- Consider anticholinergic burden scale when prescribing anticholinergic combinations.
- Avoid prescribing anticholinergics with acetylcholinesterase inhibitors e.g. donepezil, rivastigmine (can worsen cognitive impairment).
- Proactively monitor at regular intervals for efficacy and tolerance e.g. annually (or six monthly in individuals over 75 years) once clinically stable.
- If suspicion of anticholinergic induced impaired cognition, carry out a mini mental state examination (or equivalent) and consider switching or stopping if confirmed and clinically appropriate.
- Refer those suffering from significant anticholinergic side effects due to psychotropic medication to an appropriate specialist.

Table 2: Modified Anticholinergic Risk Scale (mARS):

Therapeutic Drug Group	mARS category 3	mARS category 2	mARS category 1
Antidepressants	Amitriptyline Imipramine	Desipramine Trimipramine Nortriptyline Clomipramine Sertraline	Trazodone Mirtazapine Paroxetine Lofepramine
Antipsychotics	Thioridazine Fluphenazine Perphenazine Chlorphenamine Chlorpromazine Promethazine Trifluoperazine	Clozapine Doxepin Olanzapine Levomepromazine Pericyazine	Quetiapine Risperidone Haloperidol
Nausea and vertigo		Prochlorperazine	Metoclopramide
Urinary antispasmodics	Oxybutynin	Fesoterodine Flavoxate Darifenacin Trospium Dosulepin Solifenacin	

		Tolterodine	
Sedatives	Clemastine Hydroxyzine Cyproheptadine		

Therapeutic Drug Group	mARS category 3	mARS category 2	mARS category 1
Antihistamines /Antiallergics		Cetirizine Loratadine	
Histamine H2-receptor antagonists i.e. H2 blockers		Cimetidine	Ranitidine
Antiparkinson	Procyclidine Benzatropine	Amantadine	Levodopa/Carbidopa Selegeline Entacapone Pramipexole
Others	Atropine Dicyclomine Orphenadrine Tizanidine	Loperamide Tiotropium Pseudoephedrine Baclofen Propiverine	Methocarbamol Reboxetine

4.5 Poorly tolerated drugs in frail older people

Although sometimes necessary, the following groups of drugs are noted to be poorly tolerated and associated with adverse effects (especially falls). It is particularly important to clarify if individuals on the following have a valid and current indication and if treatment is still felt to be effective (AWMSG, 2014):

- Digoxin in doses of 187.5mcg daily or greater
- Benzodiazepines and z-drugs, e.g. zopiclone, zolpidem, particularly for long-term use
- Phenothiazines (e.g. prochlorperazine)
- Antipsychotics
- TCAs
- Anticholinergics
- Combination analgesics (e.g. co-codamol)

4.6 A Pharmacist-led Information Technology Intervention for Medication Errors (PINCER): a multicentre, cluster randomised, controlled trial and cost-effectiveness analysis

The PINCER study has been shown to be an effective method for reducing a range of medication errors in GP practices.

Methodology
GP practices may wish to utilise pharmacist support to undertake the PINCER intervention (feedback, educational outreach, and dedicated support) in three specific cohorts (Avery, et al., 2012).

Three clinically important errors focussed upon during the study were:

- Those individuals with a history of peptic ulcer prescribed non-selective NSAIDs without co-prescription of PPIs;
- Individuals with a history of asthma prescribed beta blockers;
- Individuals >75 years old prescribed ACEI or loop diuretics without assessment of urea and electrolytes in the preceding 15 months.

4.7 High dose opioids

Opioid analgesics have been increasingly used to treat persistent pain; however, their safety and efficacy in the long-term management of pain is uncertain, as is the propensity for these medicines to cause problems of tolerance, dependence and addiction (AWMSG, 2016).

Opioids are effective for acute pain and for pain at the end of life, but there is little evidence that they are effective for chronic pain (The Royal College of Anaesthetists , 2018).

There is evidence that the risk of harm increases substantially at doses above an oral morphine equivalent of 120mg/day, but there is no increased benefit (The Royal College of Anaesthetists , 2018).

Individuals taking high dose opioids for chronic pain (i.e. above an oral morphine equivalent of 120mg/day) should be reviewed and the dose reduced gradually if they are still in pain, with a view to withdrawing the opioid completely (The Royal College of Anaesthetists , 2018).

For local guidance on weaning off opioids, visit **'Chronic Pain in Cornwall'** in Cornwall Joint Formulary (Huddy, et al., 2018).

4.8 Bisphosphonates

Osteoporotic fracture is associated with significant morbidity and mortality and osteoporosis should be treated appropriately. Whilst bisphosphonates are the first line treatment choice, non-compliance can be a major issue due to the administration of the drug. This should be addressed whenever possible. Also, the half-lives of the various bisphosphonates are likely to be up to ten years and there is some evidence with alendronate of a continuing effect on bone mineral density for some time after cessation. Consideration may be given therefore to stopping bisphosphonates either temporarily or permanently in some cohorts.

The Welsh Medicines Resource Centre (WeMeReC) document, 'Stopping medicines-bisphosphonates in postmenopausal osteoporosis' (WeMeReC, 2014) may be used to inform the review of individuals prescribed bisphosphonates. Practices may wish to consider stopping bisphosphonates in certain persons who have taken them for longer than five years, and/or in those with reduced renal function (e.g. alendronate should not be used in those with eGFR<30 ml/min).

However, the NICE guidance multi-morbidity recommends that bisphosphonates should be reviewed at three years (NICE, 2016).

Additional resources: PrescQIPP Bulletin 110. Bisphosphonate treatment break (PrescQIPP, 2015)

4.9 Benzodiazepines

Prolonged use of benzodiazepines leads to issues with tolerance and dependence in many people and a significant proportion of people treated long term find it difficult to withdraw from their medication. In addition to tolerance and dependence, other adverse effects associated with benzodiazepines include: over-sedation, amnesia, depression and emotional blunting, and sometimes paradoxical stimulant effects. Older people may suffer from the adverse effects to a greater degree than younger people; in particular, they are more prone to the hypnotic effects and subsequent debilitating falls (WeMeReC, 2009).

The WeMeReC guide to stopping benzodiazepines (WeMeReC, 2009) and the Clinical Knowledge Summaries (CKS) on benzodiazepine and z-drug withdrawal (NICE, 2015) can be used to inform reviews and agree withdrawal strategies with individuals.

4.10 Proton Pump Inhibitors (PPIs)

NICE covers the use of PPIs in its latest guidance on gastro-oesophageal reflux disease (NICE, 2014). Although a large proportion of prescribing may be clinically appropriate (e.g. gastro-protection with NSAIDs), there may be several reasons for wanting to stop PPIs:

- Adverse drug reactions, especially with long term use, e.g. increased risk of fracture, hypomagnesaemia.
- An increased risk of Clostridium difficile (C. difficile) infection.
- Inter-current illness or concomitant interacting medication.
- Remission has been achieved for the desired period or the response has been inadequate.
- PPI use is associated with the risk of end-stage kidney disease (ESRD) in people with renal diseases. It is necessary that appropriate prescription of PPIs is coordinated with the close monitoring of renal function of these individuals diagnosed with renal disease (Xie, et al., 2016).

People on long-term treatment with PPIs should be maintained on the lowest dose necessary to control symptoms, and reviewed periodically to assess symptom resolution and treatment tolerability (NICE, 2014). Where appropriate they should be encouraged to step down or stop treatment. Stepping down treatment may involve using a lower dose, intermittent doses, or changing to antacid and/or alginate therapy. The need for any maintenance therapy must be established (WeMeReC, 2010).

4.11 Frailty and Type 2 Diabetes (T2DM)

Diabetes is the most common chronic metabolic disorder in the UK and is an important risk factor for the development of frailty (Strain, et al., 2018). Both ageing and diabetes are recognised as important risk factors for the development of functional decline and disability (Strain, et al., 2018). In addition, diabetes is associated with a high economic, social and health burden (Strain, et al., 2018). Traditional macrovascular and microvascular complications of diabetes appear to account for less than half of the diabetes-related disability observed in older people (Strain, et al., 2018). Despite this, older people are under-represented in clinical trials (Strain, et al., 2018). Much of the evidence base used to inform this guideline has been generated from studies involving younger adults (study mean ages ranged from 45 to 68 years) (NICE, 2017). There is growing recognition that intensive glucose lowering treatment in type 2 diabetes has limited benefits and has been an increased risk of hypoglycaemia, which is particularly problematic for older people (Boussageon, et al., 2011).

The NICE guidance suggests to consider relaxing the target HbA1c level on a case-by-case basis, i.e. person-centred care, with particular consideration for people who are older or frail, for adults with type 2 diabetes (NICE, 2017):

- who are unlikely to achieve longer-term risk-reduction benefits, for example, people with a reduced life expectancy;
- for whom tight blood glucose control poses a high risk of the consequences of hypoglycaemia, for example, people who are at risk of falling, people who have impaired awareness of hypoglycaemia, and people who drive or operate machinery as part of their job;
- for whom intensive management would not be appropriate, for example, people with significant comorbidities.

The international guidance on the management of frailty in older people with diabetes (Sinclair, et al., 2018) is recently published. The guidance is not strongly reflected in guidelines for diabetes in adults from organisations such as NICE (NICE, 2017), the European Association for the Study of Diabetes (Inzucchi, et al., 2015), and the American Diabetes Association (American Diabetes Association Glycemic Targets, 2017); however, it proposes to promote the introduction of a frailty assessment scheme as part of routine diabetes management in older population (Strain, et al., 2018).

4.12 Approaches to Behavioural and Psychological Symptoms of Dementia (BPSD)

(does not cover rapid tranquilisation or acute disturbed people with dementia)

There are 850,000 people with dementia in the UK and one in six people over the age of 80 have dementia. **(Alzheimer's Society, 2018)**. Over the course of the illness, more than 90% of people with dementia develop at least one BPSD **(Steinberg, et al., 2008)**. The NICE/SCIE guideline advises against the use of any

antipsychotics for non-cognitive symptoms or challenging behaviour of dementia unless the person is severely distressed or there is an immediate risk of harm to them or others **(NICE, 2015)**. Any use of antipsychotics should include a full discussion with the person and carers about the possible benefits and risks of treatment **(NICE, 2015)**. No antipsychotic (with the exception of risperidone, haloperidol in some circumstances) is licensed in the UK for treating BPSD **(The electronic Medicines Compendium (eMC), 2018)**. However, antipsychotics are often prescribed off-label for this purpose **(NICE, 2015)**. Medication is not the first line treatment for BPSD e.g. aggressive behaviour. It is important to manage the causes of the distress leading to the behaviour.

See **BPSD pathway** on page 17.

Quick points:
Person with BPSD

- try watchful waiting, symptoms may resolve without intervention over a few months
- steadily decline in cognition over six months
- consider delirium if with a short history i.e. less than one week
  → **Follow guidelines for managing delirium e.g. NICE**
- review all medication, especially antipsychotics, anticholinergics
- identify and address provoking or exacerbating factors and physical health problems i.e. PAIN approach
- **Consider non-pharmacological approaches:**
  In many cases, BPSD often improves without the need for medication. People living with dementia, their family, friends and/or carers should be involved in treatment decisions where possible.

Examples of non-pharmacological approaches include:

- **Physical presence:** spending appropriate time with a person will usually help.
- **Recreational & social activities and therapies:** these help structure the day, providing meaning and a setting for social interaction.
- **Behavioural interventions:** Identifying the nature, antecedents and consequences of the target behaviour, setting goals and devising a plan with ongoing reviews.
- **Psychological and psychosocial interventions**: tailored to the needs of the individuals, family, carers and care staff.
- **Environmental interventions:** design and layout of the physical environment, day/night routines.
- **Compensating for sensory impairments, attending to diet and general health.**
- **Risk assessment, reduction and intervention**: including appropriate placement.
- **Complimentary therapies:** massage, reflexology and aromatherapy

Moreover, ‘Carer support’ may aid in improving coping ability of carers.

Pharmacological approaches:
Before starting antipsychotics, discuss the benefits and harms with the person and their family members or carers (as appropriate). Consider using a decision aid to support this discussion. NICE has produced **a patient decision aid on antipsychotic medicines for treating agitation, aggression and distress in people living with dementia (NICE, 2018)**.
Anti-psychotic medication should be used only as a last resort, at lowest possible dose for shortest duration, no longer than 12 weeks except in extreme circumstances **(Alzheimer's Society, 2017)**.

- if considering drug treatment, first identify dominant target symptom
- initiate drug therapy appropriate to target symptoms
- review at 6 weeks then every 3 months
- actively try withdrawing/stopping the drug

Stop treatment with antipsychotics (NICE, 2018):

- if the person is not getting a clear ongoing benefit from taking them

and

- after discussion with the person taking them and their family members or carers (as appropriate).

Some symptoms do not respond to drug treatment e.g. wandering, shouting or depression.

Approaches to Behavioural and Psychological Symptoms of Dementia (BPSD)

For individuals with Dementia and Carers (does not cover rapid tranquilisation or acutely disturbed people with dementia).

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Medication is not the first line treatment for aggressive behaviour. It is important to manage the causes of the distress leading to the behaviour.

Has person had BPSD e.g. delusion, hallucination, agitation, aggression, irritability with steady decline in cognition **OVER SIX MONTHS?**

Look at complete social/lifestyle history (**life story**) and apply **PAIN** approach, then rule out or treat differential diagnosis.

No

Does person have delirium? (short history **LESS THAN ONE WEEK**, confusion, hallucinations, delusions with fluctuating cognition)

Yes

Yes

Treat any underlying acute medical problem e.g. urinary tract infection (UTI), chest infection, side effects of drugs, alcohol or drug withdrawal.

PAIN approach

P = Physical problems? e.g. infection, pain.
A = Activity related? e.g. when dressing, washing
I = Iatrogenic e.g. side effects of drugs especially **anticholinergics**
N = Noise and other environmental factors e.g. lighting

If BPSD is not resolved by utilising the PAIN approach, move on to '**consider non-pharmacologial approaches**'.

Consider non-pharmacological approaches

In many cases, BPSD often improves without the need for medication. People living with dementia, their family, friends and/or carers should be involved in treatment decisions where possible.
Examples of non-pharmacological approaches include:
Physical presence: spending appropriate time with a person will usually help.
Recreational & social activities and therapies: these help structure the day, providing meaning and a setting for social interaction.
Behavioural interventions: Identifying the nature, antecedents and consequences of the target behaviour, setting goals and devising a plan with ongoing reviews.
Psychological and psychosocial interventions: tailored to the needs of the individual patients, family, carers and care staff.
Environmental interventions: design and layout of the physical environment, day/night routines.
Compensating for sensory impairments, attending to diet and general health.
Risk assessment, reduction and intervention: including appropriate placement.
Complimentary therapies: massage, reflexology and aromatheorapy (note: 'carer support' may aid in improving coping ability of carers).

Only consider pharmacological treatments if psychosis, depression or behaviour is harmful or distressing to the individual or others

Before starting anti-psychotic medication, discuss the benefits and harms with the person and their family members or carers (as appropriate).
Anti-psychotic medication should be used only as a last resort, at lowest possible dose for shortest duration, no longer than 12 weeks except in extreme circumstances.

Review

The prescribing doctor will follow-up with the person with BPSD and carers. It will only be used for as long as absolutely necessary. Trials of stopping the medication will be suggested to see whether or not the target symptoms return.

Follow guidelines for managing delirium e.g. NICE

NOTES:

Examples of medicines most likely to cause anticholinergic side effects:
- Procyclidine (or other medicines used to treat shaking or stiffness).
- Oxybutynin (or other medicines used to treat bladder problems).
- Amitriptyline (or some other antidepressant medicines).

Antipsychotic medicines that sometimes cause anticholinergic side effects:
E.g. Olanzapine, Quetiapine

Common side effects of Anticholinergics:
Blurred vision, problems thinking or concentrating, dry mouth, constipation, unable to wee

Are there any serious risks associated with taking anti-psychotic medicines in dementia?
The potential dangers of using anti-psychotic medication in people with dementia includes
- Sedation
- Increased risk of falls
- Increased risk of stroke and rarely sudden premature death
- Accelerated decline in the person's ability to function e.g. processing information, memory, attention and concentration etc.

Useful information and websites:
- NHS Choices
- Alzheimer's Society
- Dementia UK

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4.13 Stopping over medication of people with a learning disability, autism or both (STOMP) Programme (NHS England, 2018)

STOMP is about helping people to stay well and have a good quality of life. It is a national project involving many different organisations including NHS England which are helping to stop the over use of these medicines. Public Health England says that every day about 30,000 to 35,000 adults with a learning disability are taking psychotropic medicines, when they do not have the health conditions the medicines are for. Children and young people are also prescribed them.

The aims of STOMP are to:

- encourage people to have regular check-ups about their medicines;
- make sure doctors and other health professionals involve people, families and support staff in decisions about medicines;
- inform everyone about non-drug therapies and practical ways of supporting people so they are less likely to need as much medicine, if any.

Further information (e.g. an easy read leaflet about the project) is available via NHS England website (NHS England, 2018)

5. Related opportunities for medicines optimisation

In addition to the polypharmacy focus projects, here are some further opportunities for medicines optimisation.

5.1 Medicines synchronisation

Medicines synchronisation is when all of a person's regular medicine is brought into line on to one prescription. This means that individuals only need to order one prescription instead of multiple times throughout the month, for example. By doing this, all medicines should run out at the same time. This is obviously safer and more convenient for people but also time-saving for GP practices and pharmacies.

Synchronisation can be achieved through a number of methods, for example, pharmacist-led polypharmacy medication review.

5.2 Pharmacist repeat prescription management service

Walsall Clinical Commissioning Group implemented a pharmacist-led repeat prescription management service (PRPMS). The service was aimed at reducing medicines wastage, minimising possible harm from medicines and improving the quality of repeat prescribing. Prescribing savings were achieved by ensuring the least expensive, clinically appropriate medicines were prescribed, for example by switching from branded to generic drugs. Practice-based pharmacists worked as an integral part of primary care general practice teams to manage repeat prescriptions (Walsall Clinical Commissioning Group, 2014).

5.3 Repeat dispensing

Repeat dispensing is an alternative model for prescribing and dispensing regular medicines to those persons on stable long–term treatment, where repeat supplies are managed by the individual's pharmacy of choice. There are a number of differences and added benefits between the repeat dispensing model and traditional repeat prescribing processes (Pharmaceutical Services Negotiating Committee, 2018).

Repeat dispensing is also possible through the Electronic Prescription Service (EPS). There is therefore an advantage for GP practices to become familiar and confident with repeat dispensing to make best use of EPS.

5.4 Implementation of local guidance on medicines compliance assessment

The purpose of this guidance is to ensure that Monitored Dosage Systems (MDS) are used appropriately to support independent living and to raise awareness of a much wider range of support mechanisms which can be of benefit to people through the NHS after individual assessment. The guidance aims to standardise and simplify the assessment process for compliance aids.

A further opportunity would be to use the new assessment document to review persons currently using blister packs and/or seven day prescriptions, to ensure that the intervention is still the most appropriate and/or whether or not changes can be made to simplify the medication regimen. This will have an added advantage where care agencies have to make multiple visits to a person's home to prompt medication taking.

5.5 Improving prescribed instructions

Practices may wish to review prescriptions for items prescribed as 'as directed' with the intention of amending it to a specific dosage instruction to improve the person's understanding and adherence to treatments.

Certain people may also benefit from prescribing instructions that indicate what they are taking that specific medicine for, e.g. "take one in the morning for high blood pressure." GP practices could liaise with local pharmacies to ensure that these instructions are highlighted to patients when medicines are dispensed.

Other key prescribing points include:

- Never assume your patient is taking what you think they are taking
- Keep medication regimens as simple as possible – ideally with once or twice daily regimens
- Provide clear written instructions and a dosing schedule
- Check biochemical monitoring is up to date for high risk medicines

- Synchronise medicine quantities where possible
- Do not forget to ask about OTC products
- If medication cannot be stopped, try to substitute rather than add to medication regimens
- Consider asking individuals to bring in all medication from home when a medication review is conducted.

6. Tools to help with polypharmacy reviews

Scottish Government, NHS Education for Scotland has described the seven steps to good medication review in the 'PolyPharmacy Guidance' (Scottish Government and NHS Education for Scotland, 2018). See http://www.polypharmacy.scot.nhs.uk/7-steps/

NICE guidance recommends structured medication review for people taking multiple medicines (NICE, 2015).

See https://www.nice.org.uk/guidance/ng5/chapter/1-Recommendations#medication-review

Also, there are a large number of tools available for polypharmacy reviews. See Polypharmacy: Getting our medicines right (Draft for Public Consultation) (The Royal Pharmaceutical Society, 2018)

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