Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
1.1 Who is the focus		
Groups that will be covered: • Adults with hypertension (18 years and older). • Adults with hypertension and type 2 diabetes. No specific subgroups of people have been identified as needing specific consideration.	• Is the population appropriate? • Are there any specific subgroups that have not been mentioned? For information: Blood pressure management for adults with type 2 diabetes During the consultation for NG28 Type 2 diabetes in adults it was highlighted that the recommendations of blood pressure management required updating. Therefore this section should be removed from the type 2 diabetes guideline (NG28) and updated in the hypertension guideline.	**Group 1** • Consider frail elderly as a specific subgroup – concerns re overtreatment of this population. No age limit, people reaching highest end of demographic, frailty is v individual. • Stroke and secondary prevention – covered in current NICE guidelines • Chronic kidney disease – confusion with blood pressure targets, lots of over and under treatment of BP patients in different conditions, suggestion that it would be useful for this GL to signpost to the correct BP targets for specific conditions. NGC agreed to feedback to NICE importance of sign posting on website for patients specific to a certain group with hypertension. --- **Group 3** • Elderly – currently considered 75+. Evidence about over 80s is limited. Population is appropriate but should include: 18-80, Adults with Type 2 Diabetes & over 80s as subgroup meriting a mention (qualifying with mention of relative lack of evidence). • Suggestion to take into account women with Hypertension who may become pregnant as this determines drug given & are a large group of patients for most GPs. --- **Group 4** • Agreed • Might be worth specifying inclusion of people with renal disease whom the CKD guideline does not apply – ie specifically people

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		with CKD of 3a (eGFR 60-45)
Groups that will not be covered: • Children and young people (younger than 18 years). • Pregnant women. • Secondary causes of hypertension for example, tumours and structural vascular defects (including Conn's adenoma, phaeochromocytoma and renovascular hypertension). • People with acute hypertension or high blood pressure in emergency care settings. • People with type 1 diabetes.	• Are the exclusions appropriate for the guideline?	**Group 1** • SH's requested that 'People with acute hypertension or high blood pressure in emergency care settings' could be reworded to be clearer to reader • Investigation to make sure someone doesn't have hypertension --- **Group 3** • Malignant Hypertension presents almost always as Acute. A clarification in the scope needs to be made between Acute & Malignant, as Acute HT presents mostly in emergency settings. • [Request to update the drug cost figure in lines 40-42 as it is outdated]. • Ethnicity – will this not be considered at all? - It will be covered as an Equality concern. • People under 18 – issue was raised but evidence would not be enough or high quality; not adults; issues concerning pregnancy in under 18s would be covered by reference to pregnancy guidance. --- **Group 4** • Conflict between considering malignant hypertension and excluding people in acute settings. These are the same people.

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
Settings that will be covered: • All settings in which NHS care is provided or commissioned.	• Are the listed settings appropriate?	**Group 1-4** • SH's agreed listed settings were appropriate.

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
Key areas that will be covered in this update 1 Measuring blood pressure 2 Diagnosing hypertension 3 Monitoring blood pressure 4 Assessing cardiovascular risk cut-off and secondary causes of hypertension 5 Lifestyle interventions 6 Initiating and monitoring antihypertensive drug treatment, including blood pressure targets 7 Choosing antihypertensive drug treatment	These are the key clinical areas that have been prioritised for inclusion in the guideline. • Do you think that these prioritised areas are appropriate for the topic? • Have any areas not been mentioned? **Measuring blood pressure, diagnosing hypertension and assessing cardiovascular risk, target organ damage and secondary causes of hypertension.** • These areas were not identified as requiring an update in surveillance review therefore we need to consider; o Are these areas stable in clinical practice and therefore no longer needed in the guidance? o Should the old recommendations remain and be carried forward? o OR Is there merit of updating, if so what new evidence would change	**Group 1** 1 Measuring blood pressure • Much changed since 2011 for both diagnosis and monitoring, SHs were surprised there was no new evidence. Lots of variability in current practice depending on who you go to (no consensus as to right methodology). • Old recommendations do not go into enough detail and there is no universal implementation of these recs. • Is there now more home BP monitoring? • Clear guidelines but bad detection rates • Lack of clarity re local processes • Agreement that important to highlight and clarify this area even though no new evidence. 4 Assessing cardiovascular risk • Now more ways of identifying target organ damage • Important area to include and update • Rec 1.3.2 probably wont change • QRisk2 - covered by cross reference to Lipids guideline 5 Lifestyle interventions • “evidence free zone”! • There is no new evidence that will change the current recommendations 6. Antihypertensive drug treatment • Very important area, particularly BP targets • Agree to keep in • Important new trials, new evidence – both observational and RCT data • Key area over 80’s – every time another hypertensive

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
8 Optimal timing of antihypertensive treatment 9 Approach to resistant hypertension 10 Secondary care management of malignant hypertension.	the recommendations. **Lifestyle interventions** • Are there new RCTs in this area that will change the existing recommendations? If so, in what area? **Choosing antihypertensive treatment** For info: New evidence identified suggests that the hypertension drug pathway could be updated, in particular noted the impact on 4th line treatments. NB NICE will amend the guideline before the update of the guideline to include a footnote on the safety of ACEI/ARB in pregnant women. The footnote will make reference to the MHRA drug safety updates. • It was suggested that 1st line treatment may differ in people aged over 80, do you agree this is the only key area that will differ for this age group (re. question 6.3)	treatment is added this does more damage (e.g. increased risk of falls) • SPRINT – concern about international take up of SPRINT (e.g. taken up for people with heart failure which was a specific exclusion from SPRINT trial 7. Choosing antihypertensive treatment • Which drug not whether to choose at all 8. Optimal timing of hypertensive treatment • New area added in, specifically morning and evening trials, some trials on this still going on (due 2019) 9 Approach to resistant hypertension • ESH definition of resistant hypertension – ESH 2013 guidelines do include resistant hypertension and includes non-pharmacological intervention as an option 10 Secondary care of malignant hypertension • No longer a common condition as now better at treating hypertension, seen very rarely • Likely no new evidence • No longer called malignant, now accelerated • Noted that NICE will produce a quality standard in this area --- **Group 2** 1 Measuring blood pressure: agree that not much new evidence • SPRINT trial one of only trials to use automated office BP in the absence of an observer – no white coat effect. 2. Diagnosing hypertension: no new evidence but link to question on

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
	Secondary care management of malignant hypertension • This is quite a specialist area – are there any key studies that stakeholders are aware of that will help inform a question on this topic?	when to initiate treatment 3. Monitoring blood pressure • **Where to measure**: Evidence from Canadian model of hypertension treatment on where patients should have their BP monitored, in terms of long-term management. Large evidence base of getting BP monitored in pharmacies. Practical issues of how this can be carried out and how pharmacists would coordinate with GPs. • Bringing together all evidence to find a pathway for how and where to monitor BP • Pharmacists are heavily involved in monitoring treatment in some models, such as in Canada • Public health document in 2014 that is the basis of BP measurement, planning and funding. All of this evidence based on Canadian models • Community pharmacy policy doc Feb 2017: Pharmacy voice: talking high BP through community pharmacy • Some primary care centres are sending patients to secondary care for monitoring. This can cause delays in treatment • AMBP is recommended but the practicalities of this are unclear. Financial and contractual issues aren't allowing best practice to occur 4 Cardiovascular risk: • cardiovascular risk; no new evidence to change recommendations • secondary causes no new evidence and highly specialist area 6. Initiating treatment • Change question 6.4 to what are the benefits and risks are of each target and which targets should be recommended • - potential to look at going below these targets too • 6.2 rephrase? • Useful to look at thresholds for defining hypertension and speed

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		at which patients reach targets. • Potentially need a question on timing of treatment - some recent studies found that reaching targets immediately is more beneficial for patients. This could also influence how often patients monitor their blood pressure (need to measure more often in order to pick up changes) • In general practice currently, patients sent to HCA to monitor BP. • Step 4 most important and likely to change with new evidence • When to step up to combination treatment is an importance question (and **which populations** to give combination treatment to) • Elderly patients: no new evidence so may not need specific question for this population • Diabetes population: looking at this specifically as a subgroup. Lots of evidence available. To note: BP of initiating treatment and targets are linked e.g. if target is lower, defined thresholds for when to initiate treatment would differ too Need to define what we mean by targets and how strict these are 5. Lifestyle interventions • Cross refer to bariatric surgery guideline • General agreement that rather than using resources to update this area, in might be better to • Relaxation: not much evidence • For hypertensive: reducing salt intake is beneficial. A few trials looking at long term outcomes on low salt intake, they found a reduction in hard outcomes such as stroke. • Cross refer salt recommendations to public health guidelines (prevention of cardio disease) Choosing hypertension treatment • Possibly introducing combination drugs earlier 9. Resistant hypertension – do we need this question? Possibly change wording to persistent

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**

		• Possibly will end up needing to be kept as a research recommendation
		• Relationship to adherence
		• Important issue of how frequent this is, how its diagnosed and how it might be treated
		
		--- 	
		
		Group 3
		
		• Revised order of guidance suggested:
		  - BP level/CV disease risk
		  - Initiating Treatment
		  - Lifestyle interventions
		  - Pharmacological Treatments
		  - Monitoring
		• 6, 7 & 8 refer to 8, 9 & 10 in current scope.
		• Otherwise, all topics were considered appropriate, other than re-organising the order in which they were presented.
		
		• Home based BP measurement – needs standardisation, as all patients do this differently and with different BP measuring implements available on the market, and hence return widely varying results – much variation. Advice as to how these measurements should be recorded and used would be useful.
		
		• "Levels" of BP must be introduced because interventions might depend on stage. There needs to be a top threshold that represents high BP which would warrant instant referral or initiating treatment. Lower level is more confusing.
		
		• Using BP "Stages" (e.g. Stage 1) is complicated and guideline needs to be as simple as possible to ensure adherence. Terms like "mild", "moderate" and "severe" could be considered.
		
		• Suggestion to delete the term "primary" from all questions relating to guidance prior to actual diagnosis of primary

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		hypertension (Measuring blood pressure). Keep for question 7.1, as it deals already with choice of pharmacological treatment(s), hence, it comes after diagnosis. • Question 1.1 – alternative wording suggested: "In adults with Hypertension, what protocol should be used when measuring BP for diagnosis and treatment?" Question 1.2 – "In adults with HT, what protocol should be used for measuring BP at home?" Question 1.3 – conversion factors need updating • Diagnosing Hypertension: there should be a question 2.2 asking when to suspect 2ndary HT/underlying cause for HT. • Monitoring Hypertension – question suggested: "What is the most clinically & cost effective method (ambulatory, home or office) to monitor blood pressure/diagnose & monitor Hypertension?" Monitoring is about conversion—as patients need to be given the choice of how their BP is monitored, so conversion between results via these methods needs to be considered. • Lifestyle interventions – there is epidemiological evidence saying that salt is not really as important a factor as previously thought, so it is not worth considering. Diet – important only in terms of weight loss so relates more to obesity; only DASH diet specific to Hypertension, few quality studies that test lifestyle interventions so it is not worth the time reviewing this. • Initiating treatment and BP targets – Should hypertension be evaluated as part of a total CV risk score (e.g. as part of a number of different factors that put you at risk of CV disease), or as a marker of CV disease risk on its own? Blood pressure is normally part of a "CV risk score" calculated on the basis of a number of other factors as well. • Dundee University TIME study 2015 was mentioned. – only serious RCT and biggest study about treatment timings (morning or evening doses) – is it worth giving guidance on this before 2019 when the results of this study will be published? Agreed

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		that issue can be mentioned now, and TIME results later fed into guidance via a guideline update. • Approach to resistant Hypertension – does it exist? For most Drs it is really non-compliance with treatment rather than "resistant". Cannot discuss resistant without talking of non-compliance and there is separate guideline on adherence to treatments. Methods to measure drug levels were discussed. • Cost effectiveness of treating mild Hypertension should be considered in the guideline – but it was clarified that this will all be covered by the economic models performed by HE for the guideline. --- **Group 4** Measuring • BR problems with physician compliance with current guidelines with measuring. Different guidelines have given different guidance on number of days monitoring, be good to look at this • AW measurement of BP in people with AF. There is some tech out there, there has been some mention in HTAs, but no current recc. (was in last guideline as research recc) • RM MAY NEED TO LOOK AT risk thresholds rather than raw VP given the cardiovascular risk factors guidance. Needs to dovetail. Monitoring • Previously not enough evidence to recommend home monitoring compared with usual care, but will be more now. • Office based can now also be split to supervised/unsupervised, and there may be some evidence on that.

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		• Patients can now use their own technology to monitor throughout the day, could this be incorporated into guidance. Lifestyle interventions • The area is very important to patients, and particularly whether they can avoid medication by incorporating lifestyle changes. HOWEVER, not thought to be much new on this since last guideline Choosing hypertensive • Debate about whether we could go from class-specific to intra-class comparisons. This would be most relevant for side-effects. Also, could look at starting one drug at a time versus a number together, especially for severe and complex cases • Herbal medicines have some action on hypertension, and should be included in pharmacological management. Need to look at potential harms or any widely taken herbal remedies, including interactions. • Subgroups should be (a) people over 80, (b) people with CKD Timing • Group were aware of a study currently underway ? Time trial by McDonald Resistant hypertension • Worth doing, but may have to acknowledge that pt non-compliance is a big issue. Malignant hypertension

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		• Immediate management in emergency settings. Unlikely to be good trial evidence, nothing recent. Extremely uncommon. Would need a specialist to advise the committee. Other issues to add: 1) The annual review, and whether all mentioned needs to be done. 2) Ways of providing care – structured care, self-care, community pharmacy monitoring, etc.
Areas not covered by the guideline • Prevention of hypertension • Screening for hypertension • Specialist management of secondary hypertension (that is, hypertension arising from other medical conditions) • Non-pharmacological interventions.	• These are areas that were not covered in the previous iterations of this guideline. • Are the excluded areas appropriate?	Group 1-4 Agreed

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
Areas that will not be updated 1 Patient education and adherence to treatment.	• For information from surveillance review: • Recommendations 1.7.1, 1.7.2 and 1.7.4 should be removed and replaced with a cross referral to: NICE guideline CG76 Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence and NG5 Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. Recommendation 1.7.3 should be kept.	Group 1 • Urine testing – routine test in some clinics, not all

Hypertension : scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
1.4 Economic Aspects		
An economic plan will be developed that states for each review question/key area in the scope, the relevance of economic considerations, and if so, whether this area should be prioritised for economic modelling and analysis.	• Which practices will have the most marked/**biggest cost** implications for the NHS? • Are there any **new practices** that might **save the NHS money** compared to existing practice? • Do you have any further comments on economics?	Group 1 • Local protocols being developed • Potential biggest cost – buying machines for measuring BP (model from current Hypertension GL) • ABPM- issues with reading, need a practical guide for use (consider educational needs?) • New practices – renal denovation? Group 4 • Costs of ambulatory blood pressure monitoring (recommended in last guideline) had precluded this being rolled out in wider practice. Requires secondary referral in some areas, which had reduced is implementation for diagnosis. Potential savings from using ABP are not realised. • Evidence from sprint for lower blood pressure levels will lead to greater numbers being prescribed medication. This would need to be modelled.

Hypertension: scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
1.6 Main Outcomes		
1 All-cause mortality. 2 Stroke (ischaemic or haemorrhagic). 3 Myocardial infarction. 4 Heart failure. 5 Vascular procedures (including both coronary and carotid artery procedures). 6 Angina requiring hospitalisation. 7 Health-related quality of life. 8 Adverse events for example, acute and chronic kidney injury, falls and new-onset diabetes mellitus.	• Is the list of outcomes appropriate? • Are any key outcomes missing?	**Group 1** Cognitive decline/impairment (age specific) **Group 2** • Lifestyle interventions – hardly an trials available that look at these outcomes • MACE composite end point of includes lots of outcomes such as stroke, heart failure, hospitalisations • Weight loss – comes as a surrogate outcome **Group 4** • Could we look at cognitive decline? Hypertension related to vascular dementia. • Would like to see patient reported side effects. There is a different list for each different medication. Eg swelling on drugs like calcium channel blockers can be really debilitating and stop people taking the medication • Blood pressure not an outcome. There is evidence living BP to the given outcomes. It must be part of the guideline work to decide whether should look at this as a surrogate outcome.

Hypertension: scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
GDG Membership		
Full members Chair 1 General Medicine Physician with interest in Hypertension 2 Senior Pharmacist for cardiovascular disease 1 Patient member 2 General Practitioner 2 Elderly care physician 1 Hypertension Nurse specialist 1 Primary care nurse 1 Co-opted members Diabetologist with interest in Hypertension/renal disease 1	• Do you have any comments on the proposed membership of the committee?	**Group 1** • General medicine physician should read 'Physician with interest in hypertension' • Nurse prescriber? • Healthcare assistant? • Public health? • Note to check with NICE that Age Concern are registered as stakeholders **Group 2** • Epidemiologist – helpful in areas such as lifestyle interventions where there's a lack of long term RCTs, and recent RCTs may need epidemiologist input. Long term outcomes are needed, and NRS studies have this • Dietician – potentially co-opted for life style interventions • Expert on blood pressure devices (co optee) - Patients buy devices and use them for years but no guidance on how patients can upkeep their devices (in GP practises they have theirs services - Problem of people buying cheap devices that aren't on the British and Irish hypertension list of validated monitors. Study looked at supermarket sales and around 75% bought by public not on these lists - Similar lists of EU recommended ones (BHS) - Issue of validation vs maintenance. • Possibly at the end of the process NICE should highlight the lists of validated devices. • Maintenance of machines is outside of scope of NICE • Expert physiologists – expert related to physical activity; potentially physiotherapists or experts familiar with the evidence base • Commissioner/ someone from CCGs to help with decision

Hypertension: scope workshop discussions Date: 12/05/17		
Scope details	**Questions for discussion**	**Stakeholder responses**
		making surrounding costs **Group 4** • Need more nursing and non-medical prescribers. Would a dietitian be of use to talk about lifestyle advice. • Not sure whether specialist hypertensive nurses are as relevant as GPs and generalist primary care nurses, and practice based prescribers. Few people on the membership that are involved in non-pharmaceutical management. • LOTS OF SPECIALISTS, need more GPs because of the workloads of primary care and there is a lot of interest amongst GPs, should be swapped with a general physician. Could get elderly care physician with an interest in hypertension to compensate. Could also get a primary care nurse with an interest in diabetes.

Further questions:	**Stakeholder responses**
1. Are there any critical **clinical** issues that have been missed from the Scope that will make a difference to **patient care**?	De prescribing antihypertensives (although unsure if there is any evidence) Shared decision making. No current validated decision aid.
2. Are there any areas currently in the Scope that are **irrelevant** and should be deleted?	
3. Are there areas of **diverse or unsafe practice** or uncertainty that require addressing?	ABP monitoring due to different funding. Time between start of management and review, where some people wait a month, and others longer.
4. Which area of the scope is likely to have the most marked or **biggest health implications** for patients?	Changing thresholds for BP or for risk score.

Further questions:	Stakeholder responses
5. If you had to **delete (or de-prioritise) 2 areas** from the Scope what would they be?	Malignant hypertension Resistant hypertension
6. As a group, if you had to **rank** the issues in the Scope in order of importance what would the order be?	
7. Are there any areas that you think should be included for the purposes of the **quality standard**? Are there any **service delivery** or service configuration issues that you think are important?	Non medical prescribing models, and other service delivery models. Evidence for structured care and self care monitoring
8. Any other issues raised during subgroup discussion for noting:	The potential for genomics and personalised healthcare to cause changes in this area in the next two years or so. The problem with making a single-disorder guideline that will apply to people with multimorbidity, interacting with other guidelines and other considerations.