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General Practitioners' views of blood pressure control in people with and without dementia

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Abstract

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Introduction

Since 2012, our group has undertaken a programme of research examining the treatment of hypertension in people with dementia. Hypertension is managed by GPs, who are guided by NICE guidelines, which make no mention of different management in people with dementia. We sought to explore the views of GPs on whether they manage hypertension differently in people with dementia.

Method

We chose to try using an on-online survey to seek views, with both open and closed questions. We offered vignettes describing 71 and 83 year old women without cognitive impairment or with dementia, and a free text box – comments provided in this box were analysed thematically.

Results

Although 427 GPs responded to the questionnaire, this was only 7% of all GPs eligible. Responding GPs were twice as likely not to offer treatment to the patient aged 71 with dementia and a BP above 140/90 (NICE threshold) compared to one without dementia (23.9% vs 11.7%). A similar finding was found when the vignettes involving 83 year old women with and without dementia (using 160/100, the NICE threshold for this age group) where 7.3% would not offer treatment in the woman with dementia compared to 3.3% in those without dementia.

The analysis of free text identified four major themes, which were labelled as 'complex decisions, 'blood pressure measurement', 'uncertainties around treatment' and 'compliance with guidelines'.

Discussion

The low response rate in this survey makes the findings potentially unreliable, and other methods of ascertaining GP views, intentions or practices should be considered. Despite this, the findings from this study, in particular the free text comments indicate that the management of hypertension in people with dementia, is likely to be more complex than current guidelines indicate, and we propose that further research and clarification of best practice would be helpful.

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Introduction

Our research group is undertaking a programme of research into the management of hypertension in people with dementia. We recognise that it is now widely accepted that advanced age alone is not a contra-indication to the treatment of hypertension. UK guidelines produced by the National Institute for Health and Care Excellence (NICE) for the management of hypertension and European guidelines for the management of arterial management of hypertension differ according to age (above and below 80) and the presence of diabetes. The guidelines advise that co-pathology is taken into account in those aged over 80, but there is no specific guidance about how to amend treatment in the context of co-morbidity other than adjustment of pharmacotherapy in those with clinical features of symptomatic orthostatic hypotension [1]. There is no specific guidance for the treatment of hypertension in people with dementia.

The management of hypertension in those with dementia is uncertain. Although hypertension increases the risk of dementia [2] it is still unclear if it affects dementia progression [3,4]: lowering blood pressure levels could protect against ischaemic damage but could also increase the risk of hypo-perfusion damage. There is very little evidence of treatment benefit in people with dementia [5] largely because such people were excluded from most trials of antihypertensive therapy. People with dementia may be at higher risk of the adverse effects of antihypertensive therapy. Given this uncertainty, it may be helpful to have guidance about how to deal with hypertension in people with dementia.

In the UK, General Practitioners (GPs) are largely responsible for the management of hypertensive patients and who have to deal with this dilemma: whether to manage hypertensive patients who also have dementia in the same way as those without dementia, or to adjust management. This is not an uncommon clinical scenario: a systematic review of observational studies indicated that the prevalence of hypertension in people with dementia is 45% [6]. Only one previous study has investigated if a diagnosis of dementia affects the decision regarding antihypertensive medication for people with dementia: a study of Swedish geriatricians [7]. This showed that one third of respondents accepted higher optimum systolic blood pressure levels for people with dementia compared to people without and yet a further 13% favoured lower systolic blood pressure (BP) levels in those with dementia.

We sought to explore the views of UK GPs about the impact of a diagnosis on dementia on treatment decisions for hypertension, and to explore their views in this area to guide the need for further clarification, advice or research into the management of hypertension in people with dementia.

Method

We chose to attempt a GP survey. GPs in England were identified through the Primary Care Research Network, which emailed the survey to GP practice managers to be forwarded to 6124 GPs (Survey Monkey, see Appendix 1).

The survey was developed by the authors and based on the Swedish study by Kilander et al. [7]. Participant characteristics for years of practice and specialised training were ascertained. The survey focussed on two sets of questions; the first set of questions asked participants to state, using a list of options, the optimal systolic blood pressure levels for patients according to age and presence of cognitive impairment. The questions were 'in your opinion, what is the optimum systolic blood pressure in a 71/83 year old woman without cognitive impairment/with dementia?' The questionnaire provided nine 10mmHg BP level ranges (starting at 110mmHg or lower up to 180mmHg or higher) for the GP to choose from. The second set of questions asked to state the blood pressure level at which the participant would initiate treatment according to age and level of cognitive impairment. The questions asked 'in your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 71/83 year old woman without cognitive impairment/with dementia'. The GP could enter the blood pressure level into a free text box. Furthermore, the questionnaire invited the GPs to comment in a free text section. The completion of the survey took approximately two minutes.

A sample size of 385 was chosen based on sample size recommendations by the World Health Organisation for health research to provide responses with a specified relative precision of 10% and a 95% confidence level [8]. A non-parametric McNemar test was used to investigate differences between proportions of GPs accepting systolic BP levels above 140mmHg for a 71 year old woman with and without dementia. The analysis was repeated for the case of an 83 year old woman with a systolic BP level above 150mmHg. Paired-samples t-test for both ages were used to investigate differences in GP responses between the case with and without dementia regarding systolic blood pressure levels at which the GP would initiate treatment. A post-hoc analysis for the McNemar tests as well as the t-tests estimated a statistical power of these analyses. Descriptive statistics, McNemar tests and t-tests were computed in SPSS 22.0, the power analyses were computed in nQuery Advisor 6.0.

A thematic analysis process was applied to free text comments from GPs to elicit key concepts that were evident in the data. The analysis was completed in Nvivo 10.

Approval was obtained from the University of Nottingham Ethics Committee.

Results

427 responses were obtained (7% of all GPs). Respondents had a mean of 16 years professional experience as a GP (SD 9; range 0 to 40).

Whereas 11.7% (50/427) of respondents felt that a systolic BP above 140 mmHg (NICE threshold level for the initiation of antihypertensive therapy in adults <80) was acceptable in a 71 year old woman without dementia, this increased to 23.9% (102/427) in a woman of similar age with dementia. With dementia, the proportion of GPs considering a BP above 140mmHg was significantly higher than without dementia (58 vs 6 participants, McNemar $p<0.001$). On average, GPs would also initiate treatment at a higher systolic BP levels for a 71 year old woman with dementia ($M=150.69$, $SD= 8.58$)

compared to a 71 year old woman without dementia (M=149.10, SD=6.47, *t*(426)= -4.60, p<0.001). A power analyses indicated a statistical power of >99% for all tests.

A systolic BP above 150 mmHg is the NICE target for antihypertensive therapy in adults over 80 years of age. Whereas 3.3% (14/426) of respondents considered a systolic BP above 150mmHg as optimum in an 83 year old woman without dementia, this increased to 7.3% (31/427) felt so in a woman of similar age with dementia. With dementia, the proportion of GPs considering a BP above 150mmHg was significantly higher than without dementia (19 vs 2, McNemar p<0.001; see figure 1). On average, GPs would also initiate treatment at a higher systolic BP levels for an 83 year old woman with dementia (M=153.75, SD= 9.25) compared to an 83 year old woman without dementia (M=151.90, SD=6.43, *t*(426)= -5.47, p<0.001). A statistical power analyses indicated a power of >99% for all tests.

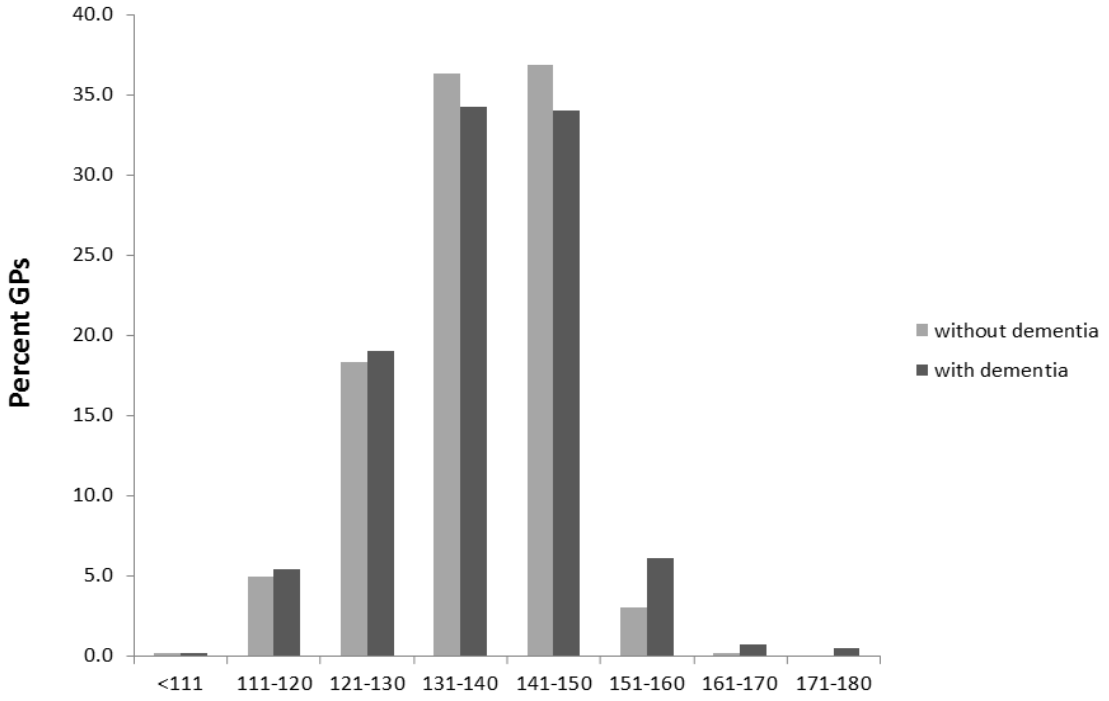

Figure 1: Systolic blood pressure levels considered as appropriate for an 83 year old woman with and without dementia

Free text respondent comments

The survey received free text comments from 126 (29.5%) respondents. A full list of comments is attached in appendix 2. The analysis identified four major themes, which were labelled as 'complex decisions, 'blood pressure measurement', 'uncertainties around treatment' and 'compliance with guidelines'.

Views expressing the complexity of decisions were included in 49 references and expressed a broad range of factors GPs would take into account when making treatment decisions. However, the factors stated in the comments differed widely between GPs. One GP, for example, stated "lots of other factors to consider, polypharmacy/risk of falls/med compliance" while another GP wrote "[this would] depend upon type of dementia (vascular), and CVD [cardiovascular disease] risk/evidence of target organ damage". Overall, these factors included co-morbidities, CVD, type dementia, adherence to medication, care situation, side effects, patient preference and polypharmacy.

Comments around blood pressure measurement were included in 19 references and mentioned the use office, home and/or 24 hour ambulatory measurements as well as frequency of measurements before a treatment decision is made. Again, the method of measurement differed between GPs. While one GP stated "would usually measure BP on three occasions, not one off reading", another GP commented "as we are doing home BP readings/24 hour BP readings, diagnosis would be made on results of that not a clinical reading". Other comments reflected this disparity, which suggested that there is no predominately used method of measuring blood pressure in primary care, or in people with mild cognitive impairment and dementia.

The theme 'uncertainties around treatment' consists of the subthemes 'uncertain how' and 'uncertain if' and was reflected in 16 comments. 'Uncertain how' indicated that some GPs are unsure about how to treat hypertension in people with dementia and would appreciate further guidelines. For example one GP wrote "[it] would be helpful to gain clear guidance with an emphasis on individually tailored care rather than targets", another one suggested "I struggle with management of chronic disease in dementia patients". 'Uncertain if' showed that some GPs would question treatment of hypertension in all dementia patients, for example one GP suggested "if it were end-stage dementia I am not sure that I would necessarily initiate treatment at all".

The theme 'compliance with guidelines' included views considering the effects of national guidelines and prescribing incentive schemes in the UK (NICE and the Quality Outcomes Framework (QOF) UK incentive scheme to GPs) on the treatment of hypertension in people with mild cognitive impairment and dementia. However, while most comments only hinted at the effect of guidelines, for example reflected in the comment "don't forget the work we have to do for QOF which changes things", only one GP clearly named the effect "I have felt for a long time that the QOF framework has led us to over-treat many patients in whom the additional risk of BP is less than the adverse effect they get from BP lowering medication."

Discussion

In this study, most GPs stated they would not offer different hypertensive treatment to people with dementia compared to those without dementia. However, the presence of dementia influenced such decisions in a minority of GPs (1 in 8 in a patient aged 71 and 1 in 25 in an 83 year old). Free text comments revealed some uncertainty about the treatment of hypertension in people with dementia, and considerable recognition of the

complexity of such treatment in face of linked issues such as co-pathology and polypharmacy.

Given the small proportion of GPs who responded (7%), we cannot exclude a respondent bias: it may suggest that only a small proportion of GPs are interested in the topic of hypertension in people with dementia, and so care should be taken in extrapolating the findings to the views of all GPs. For example, a self-selection bias might have been introduced due to the format of online survey, which might not have been a preferred method for all GPs. However, while the survey has been mailed out by the Primary Care Research Network to all General Practices in the England, it cannot be ascertained that every GP received or had access to the survey.

The free comments from the respondents however suggested that a wide range of issues motivated GPs to participate in the survey. The comments also indicated the difficulties of asking simple questions about optimum blood pressure levels, given the complex factors that are involved in blood pressure control in practice – diastolic pressures, co-pathology, vascular risk, age and so on. We chose to limit the number of scenarios offered to respondents to increase the response rate and to focus on dementia, our primary area of interest. Also, GPs might have answered differently depending on type of dementia, although this diagnosis is often unknown in practice and cannot be taken into account in the decision making process. Further qualitative research would be required to provide greater in-depth understanding of the factors associated with prescribing antihypertensive medication in those with dementia.

While some GPs took a diagnosis of dementia into account, for most GPs this had no direct effect on their treatment decision. The NICE guidelines for hypertension [1] support both positions. The guidelines recommend consideration of co-morbidities based on realistic expectations of clinical benefit and life expectancy (and the free text comments from GPs reflected this) but the guidelines do not refer to specific co-morbidities and suggest continuing treatment for those who are already receiving antihypertensive medication. No specific recommendations for people with dementia are given, although some GPs would have considered these as helpful as indicated in the free text comments.

Compared to the responses of Swedish geriatricians [7], only a small percentage of English GP's considered systolic blood pressure levels higher than 160 mmHg to be optimum for a woman over 80 years of age (39% and 1.2% resp.). This contrasting finding is likely to be caused by differences in guidelines across countries and the time each study was undertaken: Swedish guidelines at the time of the Swedish study recommended initiation of treatment at systolic BP levels of ≥ 180mmHg in people between 70 to 80 year old [9]. No further studies investigating GP views on optimum levels of blood pressure in people with dementia have been published.

Our findings indicate a modest degree of concern amongst GPs about the management of hypertension in people with dementia, although this was lower than in a previous study. We propose that it would be helpful for those responsible for the management of hypertension to have guidance based on robust evidence of the benefits and harms of antihypertensive therapy in people with dementia and with advancing age. This would enable all practitioners responsible for the management of hypertension to provide the

best evidence to patients who have dementia when offering or continuing antihypertensive medications. Further research is required to improve the understanding of the treatment of hypertension in people with dementia and to establish if antihypertensive treatment can be withdrawn in people with dementia without the return of hypertension, whether the harms associated with antihypertensive treatment are in line with those seen in the trials of antihypertensive treatment, and whether offering shared decision making in later stages of dementia would lead to safer and more acceptable practice.

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Ethical Approval

Ethical approval for this study has been obtained from the University of Nottingham (reference number P11072013 13072 CHS Rehab & Age)

Competing interests

None of the authors have any conflicts of interest that might bias this work.

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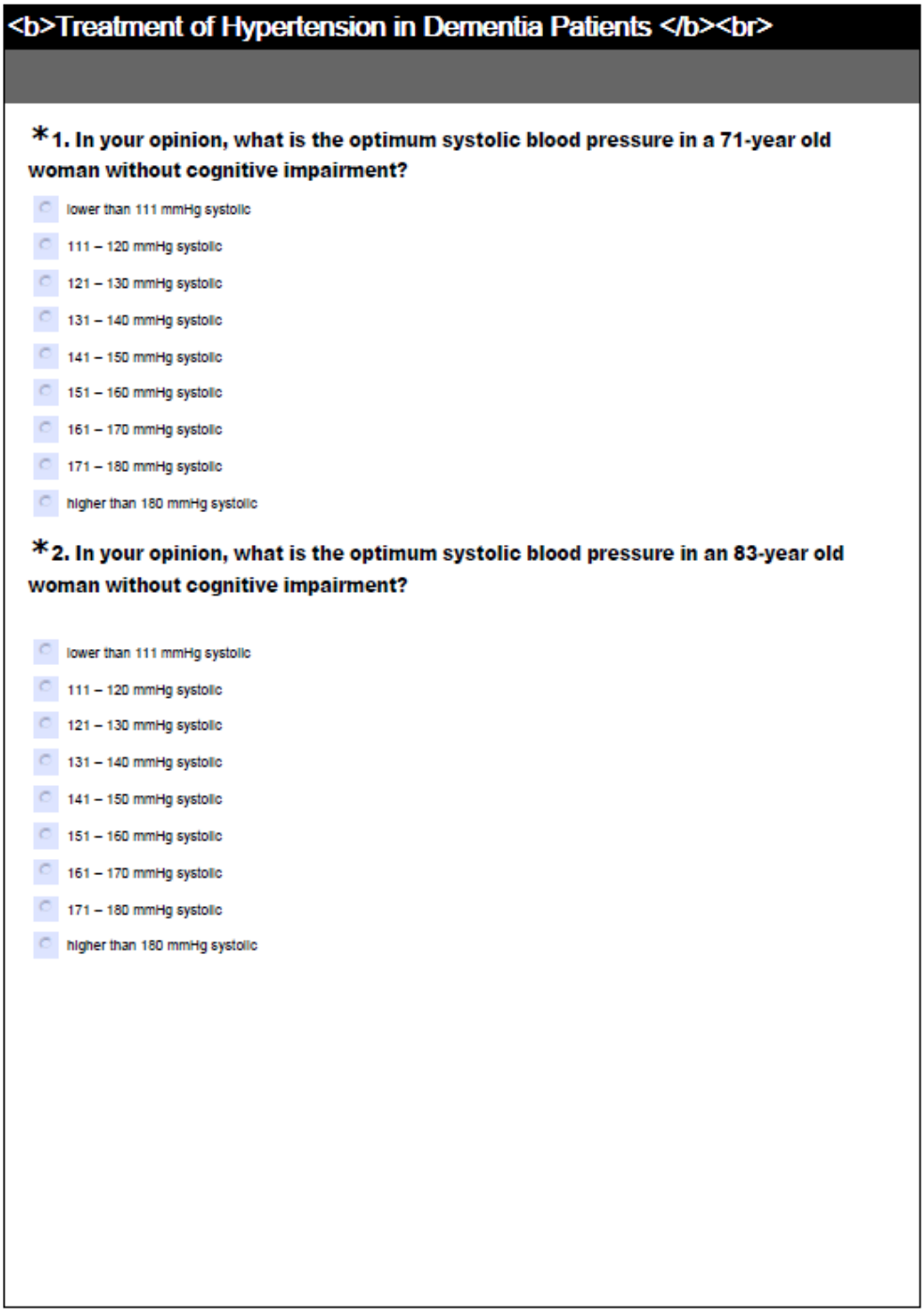
Appendix 1: Survey



Treatment of Hypertension in Dementia Patients

*1. In your opinion, what is the optimum systolic blood pressure in a 71-year old woman without cognitive impairment?

- lower than 111 mmHg systolic
- 111 – 120 mmHg systolic
- 121 – 130 mmHg systolic
- 131 – 140 mmHg systolic
- 141 – 150 mmHg systolic
- 151 – 160 mmHg systolic
- 161 – 170 mmHg systolic
- 171 – 180 mmHg systolic
- higher than 180 mmHg systolic

*2. In your opinion, what is the optimum systolic blood pressure in an 83-year old woman without cognitive impairment?

- lower than 111 mmHg systolic
- 111 – 120 mmHg systolic
- 121 – 130 mmHg systolic
- 131 – 140 mmHg systolic
- 141 – 150 mmHg systolic
- 151 – 160 mmHg systolic
- 161 – 170 mmHg systolic
- 171 – 180 mmHg systolic
- higher than 180 mmHg systolic

Page 1

Treatment of Hypertension in Dementia Patients

***3. In your opinion, what is the optimum systolic blood pressure in an 71-year old woman with mild cognitive impairment?**

- lower than 111 mmHg systolic
- 111 – 120 mmHg systolic
- 121 – 130 mmHg systolic
- 131 – 140 mmHg systolic
- 141 – 150 mmHg systolic
- 151 – 160 mmHg systolic
- 161 – 170 mmHg systolic
- 171 – 180 mmHg systolic
- higher than 180 mmHg systolic

***4. In your opinion, what is the optimum systolic blood pressure in an 83-year old woman with mild cognitive impairment?**

- lower than 111 mmHg systolic
- 111 – 120 mmHg systolic
- 121 – 130 mmHg systolic
- 131 – 140 mmHg systolic
- 141 – 150 mmHg systolic
- 151 – 160 mmHg systolic
- 161 – 170 mmHg systolic
- 171 – 180 mmHg systolic
- higher than 180 mmHg systolic

***5. In your opinion, what is the optimum systolic blood pressure in an 71-year old woman with dementia?**

- lower than 111 mmHg systolic
- 111 – 120 mmHg systolic
- 121 – 130 mmHg systolic
- 131 – 140 mmHg systolic
- 141 – 150 mmHg systolic
- 151 – 160 mmHg systolic
- 161 – 170 mmHg systolic
- 171 – 180 mmHg systolic
- higher than 180 mmHg systolic

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Treatment of Hypertension in Dementia Patients

***6. In your opinion, what is the optimum systolic blood pressure in an 83-year old woman with dementia?**

- lower than 111 mmHg systolic
- 111 – 120 mmHg systolic
- 121 – 130 mmHg systolic
- 131 – 140 mmHg systolic
- 141 – 150 mmHg systolic
- 151 – 160 mmHg systolic
- 161 – 170 mmHg systolic
- 171 – 180 mmHg systolic
- higher than 180 mmHg systolic

***7. In your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 71-year old woman without cognitive impairment?**

Systolic value

Diastolic value

***8. In your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 83-year old woman without cognitive impairment?**

Systolic value

Diastolic value

***9. In your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 71-year old woman with mild cognitive impairment?**

Systolic value

Diastolic value

***10. In your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 83-year old woman with mild cognitive impairment?**

Systolic value

Diastolic value

***11. In your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 71-year old woman with dementia?**

Systolic value

Diastolic value

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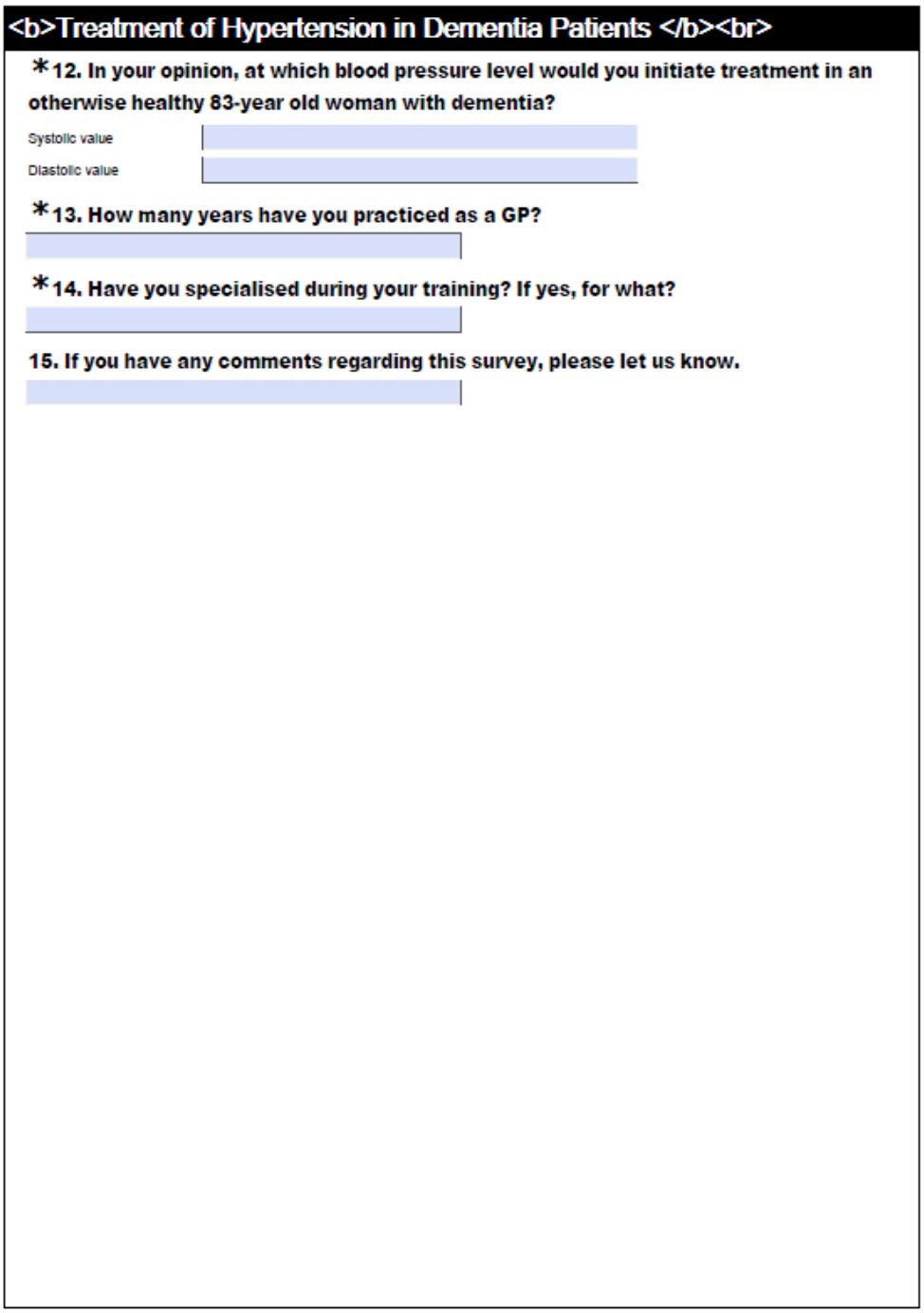

Treatment of Hypertension in Dementia Patients

*12. In your opinion, at which blood pressure level would you initiate treatment in an otherwise healthy 83-year old woman with dementia?

Systolic value

Diastolic value

*13. How many years have you practiced as a GP?

*14. Have you specialised during your training? If yes, for what?

15. If you have any comments regarding this survey, please let us know.

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Appendix 2: Comments from GPs regarding GP survey

- None - I use NICE BP guidelines. There is not so much hypertension in the dementia
- I found that it was quite difficult to put just one value that I'd treat, because in reality you don't act on just one value, it's several over time.
- I would question treating hypertension in patients with dementia
- The scenarios are too simple. Is the dementia vascular in origin? Is she at risk of getting muddled over her tablets and taking too many? What is her quality of life and is there value in prolonging it?
- Would be interesting to know the result
- Overly simplified and poorly worded questions. Likely to give misleading data.
- Unfortunately a large number of patients with dementia land up being Exception reports in QOF!!!
- Please define terms 'optimum' as target or threshold also NHS/UK or gold standard international?
- Don't forget the work we have to do for QOF which changes things
- If vascular dementia, would initiate treatment at lower threshold (ie stage 1 hypertension)
- Sorry but this is poorly designed. 'Optimum' blood pressure is a very different concept than 'acceptable' or 'target'. Treatment decisions also depend on MANY different variables - not just absolute BP levels. Patient preference and opinion is very relevant. There also is the problem of accurate assessment of blood pressure!
- Lots of other factors to consider, polypharmacy/ risk of falls/ med compliance
- Very testing - look forward to correct answers!
- Need more clinical info, eg CVD risk
- Many other factors that i would take into consideration when initiating treatment for hypertension rather than just absolute value
- I do not agree with you question about optimum BP - this should be any BP less than 140/90 in any healthy person + probably less than 130/85 in anyone with pre-existing disease indicating CVS strain like cognitive impairment
- Great survey, I am interested to see if gets any follow up, hypertension treatment in the elderly is generally a grey are. More often it is a question of stopping and low blood pressures.
- Too simplistic. Lots of other factors at play
- As we are now doing home BP readings/24 hr BP readings diagnosis would be made on result of that not a clinic reading
- Clearly treatment thresholds will vary with each individual patient and treatments need to be tailored to the said individual.
- Would like to have been able to give ranges
- Nice one
- Difficult to say at what BP would initiate treatment as would look at overall cardiac risk and have insufficient clinical info. Also would start treating at lower BP for vascular dementia than Alzheimer's

- False premise - do you mean vascular dementia in which case I may be more aggressive or other? Too simple to set a tick box target - co-morbidities, compliance, orthostatic drops, etc, make this far too simplistic
- No possibility to comment about patient choice and multi morbidity and care setting which might impact on treatment decision!
- Too simplistic
- It is hard to answer as you never solely base your decision to treat on purely one BP reading
- BP alone does not determine treatment as such
- Comorbidities/compliance/other medication will all influence the decision
- Treatment of patients with mild cognitive impairment or with dementia depends on compliance with medication and whether or not there is a system in place to ensure patient will take medication regularly so in some ways these figures mean nothing , all depends on individual patient and home circumstances
- Assessment of postural drop is important especially for the very elderly patients
- Ambulatory/home or clinic BP?
- Made me feel very unsure and inadequate- I seem to feel optimum BP same for all groups and would treat at same levels also!!!
- Very hard to answer these questions as each patient needs to be individually assessed ie ? co morbidities such as DM has the patient had falls etc
- Very hard to generalise - I would not treat any hypertension if dementia was severe but sadly every dementia check I do involves recording BP. I tend to ignore high BPs in most of my patients in a local EMI unit on the basis that if their dementia is severe enough to be in a home, then I would be doing those patients no favours by treating hypertension. I find that very low BPs are more of a problem with my severely demented patients. And I do review all medication of these patients as they join the home and reduce a lot of their BP meds. Falls are a common problem often due to postural hypotension. Incidentally, for those patients in the community who are fit in every way but have hypertension and dementia, (not that common a presentation - they usually have other co-morbidities, compliance with medication would be a problem and may open a whole new can of worms!
- Your survey does not distinguish between dementia due to Alzheimer's disease or dementia due to microvascular cerebral disease. The latter would prompt treatment at a lower BP level.
- I will be interested in the results as my opinion is that optimal BP control is important for general wellbeing and in particular reduction of risk of cerebrovascular disease, which is more important in people with dementia
- Fairly meaningless without knowing other details of patients eg CKD, DM etc
- My opinions on blood pressure management would be greatly altered if the patient had multimorbidities (not just dementia). Also, if it were vascular dementia I may be more aggressive with my treatment than with e.g. Alzheimer's dementia. And if it were end-stage dementia I am not sure that I would necessarily initiate treatment at all.
- The questions are difficult to answer, because the decision to initiate treatment would actually be based on a 24 hr BP recording & the thresholds are lower for a 24 hr BP reading. The thresholds for initialling treatment without waiting for a 24hr BP reading are higher than the ones I've given

- Pts. with adv. dementia frequently have quite low BP's
- BP's are for patients with no other risk factors, otherwise I would go for threshold of 140/90 to initiate treatment at 71, 150/90 at 83;more likely to repeat BP's several times and get 24 hr BP before deciding-threshold after 24 hr BP is lower
- My answers might be different if I was comparing an active physically fit patient with dementia compared to one who is bed or chair bound
- Difficult to answer as no mention any other end organ damage or CV risk score
- No/Assumed only risk factor was vasc dementia
- I am afraid this survey does not reflect the complexity of decision-making that goes into making a diagnosis of hypertension, especially in an older person with cognitive impairment. Decisions are also being made about when or whether to measure a person's blood pressure - which are also not reflected in the survey. I am therefore afraid that my responses above do not accurately reflect my practice as they simplify things down too much. I believe a qualitative survey would be more helpful for you to accurately determine current clinical practice!
- Would be helpful to gain clear guidance with an emphasis on individual tailored care rather than targets
- Your cases were single-condition which like most guidelines completely useless in face of multimorbidity. You did not include other morbidity/psychosocial aspect which will affect management decisions.
- What is the framework base
- In principle I would treat BP regardless of dementia but would be more wary of side effects in dementia so in practice possible would be less likely to treat
- questions are a bit leading - I don’t think I have an 'optimum' just a cut off when action required
- Need to balance risk of polypharmacy and risk of falling with dementia and antihypertensive meds.
- Depends on what type of dementia - more likely to treat vascular dementia harder
- I can see what you're getting at but I think this survey is flawed as it doesn't reflect current practice. I don't use simple BP reading any more but look for end organ damage in accordance with NICE to guide me. I haven't used ABPM on a patient with dementia and could potentially see problems there.
- Had you thought about QRISK rather than absolute levels of BP? I have put in some BPs for the 71 year olds - but in reality would base it on risk which takes into consideration other factors eg smoking, FH etc
- Optimum max BP ie better if lower than this
- Useful to highlight a gap in my knowledge, thank you!
- Why treat differently?
- Decision about treatment includes questions about co-morbidities, polypharmacy, life expectancy etc
- There is more to a decision than just the BP, compliance with meds and other PMH matters too
- Treatment levels depend on patient preference since evidence of treating 80+ at 150 / rather than 160/ is not strong
- I am not sure that the simplicity of the questions captures the information you are trying to get

- Treatment of BP if <75 years depends on CV risk (Q risk) , therefore questions on levels in this age group not relevant. Also depends on dementia type, if vascular may treat as high risk (treat if over 140/90)
- Doesn't tell you anything else about comorbidities
- OK
- I use ambulatory monitoring frequently - this is not taken into account by this survey. The above answers do not take into account patients' wishes or attitude to risk which I try to accord with.
- This survey lacks definition of treatment - I have taken it to mean initiating lifestyle advice for stage I hypertension. Treatment would differ depending on cause of dementia and ability to comply with treatment amongst other factors
- Cause of dementia- targets may be different if multi-infarct rather than Alzheimer's
- In terms of optimum BP targets a range of 10 seems quite narrow, and i would have been inclined to have selected more than one of these
- Not very clear questions as to what 'optimum BP means'. Is this the target we are driving for or 'just what is best'? Also, my target aims for BP are usually <140/80 for patients <80 and 150/90 in >80s - but the questions about when I would 'initiate' treatment, don't give me space to indicate what my target would be. I don't think dementia is a specific reason not to treat BP or to treat it more aggressively. Dementia is often related to high BP so I would maintain the same targets -
- Re Q7-12, if CVD risk raised or target organ damage then threshold will be 135/85, as per NICE
- Every patient is different and more complicated than the example used. TREAT THE PATIENT NOT THE NUMBER
- I am not sure it will be useful
- I would treat any with dementia the same as a pt without dementia, if that is the wishes of the family. i would however question the family and ask them to think about any treatment and what they hope to gain from any treatment, esp for a chronic disease like HTN.
- If the dementia is vascular need to consider watershed ischaemia and tend to be more lenient.
- It is never as clear cut as the numbers though, other co-morbidities and expressed preferences play a definite part
- The chronological age is irrelevant depends on the biological age and cvs risk ,risks of postural hypotension (ie in osteoporosis I would allow a higher BP reading) also h/o falls -also type of dementia (multi-infarct or Alzheimers) and other co-morbidities
- The "optimum" ranges imply that one wishes to have the BP in that range, a better wording would have been "BP up to..", as in my view the optimum range is larger than 10mmHg
- Difficult to tell in first questions whether you mean treated or untreated BP - I'm assuming latter
- I have felt for a long time that the qof framework has led us to overtreat many patients in whom the additional risk of BP is less than the adverse effects they get from BP lowering medication
- I assumed that there is no CVD risk and not 24hr- BP values asked for

- Could not answer questions 5 and 6 as I don't think I can categorise optimum BP for patients with dementia, likewise for Q11 and 12.
- Treatment would also depend on co-morbidities in all cases.
- There is an assumption there are no other comorbidities and risks. seeing the response and potential side effects at follow up might alter the approach
- You have left no room to discuss whether it is appropriate to always give life prolonging treatment to patients with dementia e.g. for patients with dementia needing nursing home care should be withdrawing these treatments - how about some research about when to stop antihypertensives and statins in dementia not just start them??
- Really stupid survey as it all depends on actual cognitive ability. also evidence suggests that over 80s need to run at a higher BP than younger people
- These values are very much a guide as I really need to know about other comorbidities and carer support!
- Unfortunately I am not sure if my answers are helpful as what might be 'optimum' does not reflect levels that I would actively treat. Similarly I would base decision to treat on many other factors than those presented in the questions etc
- Values 140/90 is if established CVD disease would be 160/100 if not. Would not discriminate if pt was safe to take meds i.e if has a carer may not treat if falls were an issue. If vascular dementia treating would be very relevant. Each pt would need individual risk benefit assessment
- I look after a nursing home with patients with severe dementia
- Your questions are confusing. What do you mean with 'optimum' BP? I have assumed it to mean without treatment. Or do you mean what we would aim for with aggressive BP treatment in case of hypertension?? Also the question about which level BP to treat is in my opinion not the right question. I would carefully try to initiate antihypertensives in people with dementia as I know that statins and antihypertensives are the most important thing to do to prevent deterioration in vascular dementia, but you do not specify what sort of dementia. Also, even though I would initiate treatment to see if it is tolerated I would have a much lower threshold for stopping of reducing dose if there were any side effects occurring. Again this is not a question that you ask.
- You do not distinguish between office and ABPM. also the social circumstances of the patient and the patients' own opinion need to be taken into account, risk of falls, concordance issues they all play in to the decisions
- Please note that the BP thresholds are based on 24hr BPs for the patients with no cognitive impairment and MCI, but on surgery readings for the patients with dementia. I tried to specify this but the boxes would not accept the text.
- In view of current guidelines would be of value to discuss whether using clinic and AMBP measurements
- Treatment also depends on CVD risk, CKD status, ability to take medicines etc. In real life, one doesn't just take BP readings into account when deciding to treat or not: where possible the patient also needs to be involved in the decision to treat or not to treat.
- Survey is of no help as it all DEPENDS on what the clinical condition of the patient is, all patients can be treated the same dementia or no dementia and there will be no discrimination, however if a patient is non compliant with medication, has

severe dementia, might be getting side effects of medication you might choose not to treat

- NICE guidance is not clear on dementia i.e is this evidence of end organ damage , should hypertension be treated at stage 1 i.e. > 140/90. without cognitive impairment I would also treat at stage 1 if there is end organ damage or risk > 20% CVD.
- I have caveats these are all ambulatory or home blood pressure readings and I assume cvd risk is less than 20% if risk is greater than 20% I would treat all cases if BP greater than 135/85
- Difficult as lots of factors, would usually measure BP on three occasions, not one off reading.
- It doesn't mention CVD Risk and end-organ damage which is part of the 2011 NICE BHS Guidelines. The systolic/diastolic thresholds are different depending on CVD Risk or end-organ damage so your survey is a bit over-simplified but I have to admit I was not aware of different levels according to cognitive impairment / dementia
- Would be interested to know whether BP readings are from the surgery or home readings as there can be a difference between optimal readings by 10 points
- There a lot of other variables to take into consideration
- Thanks
- Survey too simplistic. Other factors like co-morbidity, family support to takes meds etc need considering
- I usually have the BP guidelines handy in my surgery so I haven't memorised them lately
- Potential effects of hypertension can have more impact on careers of dementia patients. Could be difference between care at home and needing specialist care
- Questions too general
- Would be more aggressive managing BP in vascular dementia that in Alzheimers/Lewy body etc
- Presumably the question based on NICE hypertension guidance would be "should dementia count as a secondary prevention-defining condition" and if so the treatment threshold and targets should be the tighter ones. However patients with dementia are also at higher risk of having falls if their BP medication is raised too high.
- Treating BP in dementia depends on compliance factors. However if it is vascular dementia the BP is even more important
- Impossible to answer these questions accurately as NICE guidelines rely on home readings so I don't initiate antihypertensives based on clinic readings any more. Also, if Qrisk is >20% I would commence bp mend at a lower level
- You should have specified whether the BP readings were surgery reading or ABP as per NICE guidelines 2009, I have assumed ambulatory readings
- Clinic readings or amb readings!
- I suspect most of us blindly do what QOF suggests
- Difficult to adv clearly in abs of info re end organ damage, severity of 'dementia'
- Really difficult to make blanket decisions, depends on 24h BP, end organ damage, diabetes, self care, risks at home etc etc. I would act on the individual, what they want, look at their blood test results, dosette box availability. Too specific to answer.

- Questions 5,6,11, 12 are too vague to answer. What level of dementia do you mean?
- I struggle with management of chronic disease in dementia patients
- Depend upon type of dementia (vascular), and CVD risk/evidence of target organ damage
- Email suggested it would take 15 mins to complete .... it takes a lot less so you might get better uptake if you advise people 5 mins to complete!
- Black and white questions only get similar answers. Patients are never in this category
- Surely the hypertension guidelines should be followed, ie monitor and advise lifestyle changes in stage 1 hypertension if no target organ damage. in the guidelines, cognitive impairment is not given as a condition to treat stage 1 hypertension but one would treat stage 2 hypertension ie BP > 160/100 regardless of age.
- Question in the survey are vague as medication initiation depends on stage of HT and CVD risk (NICE 2011)
- Best wishes with your work
- The questions are too vague as a lot of factors come into consideration when considering treating blood pressure - other comorbidities for example CKD and IHD etc, also we have to consider NICE guidance etc
- Starting treatment should really be on the basis of risk. Most 71 year old women are going to have a reasonable level of risk, and certainly in the over 80s, but also in the 70s, the main driver of risk is systolic BP, so this is where I focus my efforts.
- Why treat differently unless there are issues regarding medication or falls?