Notes for 5.3.19 Presentation

(1) Thanks for asking me to present here today. I used to be a nephrologist and worked in most of the DHB's in the upper North Island – most recently Waitemata which I left in 2014. I now do full-time private practice and 80% of my patients have difficult or resistant hypertension. The first title Harvey offered me was "The Hypertension Crisis in New Zealand" which I did not feel qualified to tackle. However I do have some strong views..

(2) According to WHO hypertension is still the most common remediable cause of death worldwide

(3) And I do believe that hypertension in New Zealand is not particularly well managed from the public health point of view anyway. We know for example that about 1/3 of NZ men (> 18 years) and ¼ women have hypertension, but a significantly lower proportion of the adult population is on antihypertensive treatment. Also if you tally up all the antihypertensive drug prescriptions in 12 months it is consistent with significant undertreatment of the problem.

(4) Similarly, I am not an expert on cardiovascular epidemiology, but hard endpoints like stroke rates suggest that although things have improved since the early 1980's we may not have done as well as some other countries, and among Maori and Pacific people may actually be increasing again.

(5) To give you my perspective on how we could improve things, I want to briefly touch on these 4 topics
- Recent trials which have influenced or approach to diagnosis and management of hypertension
- Definition and diagnosis of hypertension
- Secondary causes
- Pharmacological management

(6) These are the acronyms for some of the most influential trials in the last 10 years and which have had disproportionate influence on current blood pressure management guidelines

ACCOMPLISH 2008 – established that de novo combination therapy in stage 2 hypertension effective and well tolerated, with excellent CV outcomes, and established the best combination for CV outcome
HYVET 2008 – established unequivocally that treating hypertension in individuals > 80 years is worthwhile and helped to set BP targets for that age group
SPRINT 2015 – bucked the trend of previous studies by demonstrating improved CV outcomes for high risk hypertensive individuals when SBP is maintained closer to 120 than 140mmHg – this has probably been the most influential study of the past decade and has heavily influenced the latest guidelines
PATHWAY 2 2015 – clarified the optimal management of resistant hypertension
PATHWAY 3 2016 – clarified optimal use of thiazide diuretics
Triumph 2018 and PATHWAY 1 (awaiting publication) – demonstrated the role for fixed dose 2 and 3 drug combinations in routine hypertension management
An a variety of ABP and HBP studies have established unequivocally that CV outcomes are clearly better correlated with ambulatory and home BP compared with office BP

(7) Just to remind you about the SPRINT trial, which has been so influential …. The central research question was whether, in high risk hypertensives, a target BP of < 120mmHg conferred a cardiovascular outcome benefit compared with the standard target of < 140mmHg

(8) Nearly 5000 participants were randomise to each arm…

(9) And all the participating physicians were required to do was treat, with drugs of their own choice, to the appropriate target. As you can see, excellent separation was achieved with a mean achieved SBP of 121mmHg in the intensive group and 136mmHg in the standard group

(10) Furthermore, the trial was terminate early at 3.5 years because there was clear separation in outcome between the 2 groups favouring the intensive group with the lower BP target which had lower rates of fatal and nonfatal major cardiovascular events and death from any cause

(11) So we've got a couple of new hypertension guidelines and new definitions and classifications of hypertension – the first is the ACC/AHA guideline from 2017 which has redefined hypertension as > 130/80 and 120-129/<800 is designated elevated BP.

(12) Scarily, based on this classification, the incidence of hypertension in adult Americans goes up from 32 to 46%

(13) The guideline suggests that for stage 2 hypertension – that is > 140 +/- 90 all patients get treated pharmacologically, and for stage 1 hypertension pharmacological treatment if 10 year cardiovascular risk using the

(14) The 2018 ESH guideline designates 130 – 139 as high normal but does nevertheless recognise a continuum from so called optimal to normal to high normal to HTN – acknowledging that the gradation of risk with starts from very low levels