



Improving the Management of Hypertension by Tackling Awareness, Adherence, and Clinical Inertia: A Symposium Report

Atul Pathak^{1,2} · Neil R. Poulter³ · Michael Kavanagh⁴ · Reinhold Kreutz⁵ · Michel Burnier⁶

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Abstract

Hypertension remains the leading cause of global mortality, with elevated systolic blood pressure (BP) leading to 10.8 million deaths each year. Despite this, only around 50% of individuals with hypertension are aware of their condition. Alongside low awareness rates, lack of patient adherence to medication and therapeutic inertia have been identified as factors contributing to the lack of hypertension control worldwide. This report summarizes presentations from the “one of a kind” Servier-sponsored symposium, *Improving the Management of Hypertension: Acting on Key Factors*, which was conducted as part of the European Society of Hypertension (ESH)-International Society of Hypertension (ISH) 2021 ON-AIR meeting. The symposium focused on how low awareness, therapeutic inertia, and nonadherence can be addressed by combining the experience of a patient with the expertise of physicians. May Measurement Month, the ongoing global BP measurement program, is raising awareness of hypertension in over 90 countries, and the 2018 European Society of Cardiology/ESH guidelines and the 2020 ISH guidelines now include recommendations that specifically address low adherence and therapeutic inertia, including involving patients in a shared decision-making process and the use of single-pill combination therapy. Understanding the role of emotion in decision making and addressing the different psychological states and attitudes in the patient’s “cycle of change” are key to effective shared decision making and improving adherence.

Plain Language Summary

Raised blood pressure (hypertension) is involved in the death of around 10.8 million people throughout the world each year. However, only about half of the people with hypertension are aware of their condition. In addition, many patients who are prescribed blood pressure-lowering medications do not take their pills regularly (intentional or nonintentional low adherence). Many doctors are not as strict as they should be in ensuring blood pressure control of their hypertensive patients (therapeutic inertia). This report presents ideas and data from a “first of its kind” symposium sponsored by Servier as part of the European Society of Hypertension (ESH)-International Society of Hypertension (ISH) 2021 ON-AIR meeting involving both patient and physicians. The report summarizes the ways in which low awareness, therapeutic inertia, and lack of adherence can be addressed and includes insights into patients’ perspectives. An ongoing global blood pressure screening

✉ Atul Pathak
profapathak@gmail.com; atul.pathak@chpg.mc

¹ Department of Cardiovascular Medicine, ESH Hypertension Center of Excellence, Centre Hospitalier Princesse Grace, 1 Avenue Pasteur, BP 489, MC 98012 Monte Carlo, Monaco

² UMR UT3 CNRS 5288, Toulouse, France

³ School of Public Health, Imperial College London, London, UK

⁴ Global Heart Hub, Galway, Ireland

⁵ Charité – Universitätsmedizin Berlin, Institute of Clinical Pharmacology and Toxicology, Berlin, Germany

⁶ Service of Nephrology and Hypertension, University Hospital, Lausanne, Switzerland

program called May Measurement Month was discussed, which has detected almost a million people with untreated or inadequately treated hypertension worldwide since 2017. Recent ESH and ISH guidelines for managing hypertension now include recommendations on how to address low adherence and therapeutic inertia. Crucially, doctors should involve their patients with hypertension in decisions about their own treatment, which will help improve adherence to medication and ultimately reduce hypertension-related serious adverse events (e.g. heart attacks, strokes and deaths).

Key Points

High systolic blood pressure (BP) results in 10.8 million deaths worldwide each year, yet globally, only around 50% of people with hypertension know they have the condition: among them, less than 50% are treated, and less than 50% of treated patients have their BP at target.

Lack of BP control results partly from poor adherence by patients and lack of action by doctors to ensure patients' BP is adequately controlled (therapeutic inertia).

The BP initiative called May Measurement Month is helping to raise awareness globally, but doctors also need to involve their patients in decision making to improve medication adherence and hence control.

1 Introduction

An estimated 1.13 billion people worldwide have hypertension, according to 2015 figures [1]. Diagnosis and treatment of hypertension have improved markedly in high-income countries since the 1980s but have plateaued in the last decade [2]. While there are numerous regional or country-specific hypertension registry studies and treatment programs/guidelines, there is considerable variation among countries in terms of hypertension awareness, diagnosis, and control [2].

Lack of adherence and treatment inertia have been identified as important factors contributing to lack of blood pressure (BP) control [3, 4]. To highlight and attempt to address these issues, Servier sponsored a symposium entitled *Improving the Management of Hypertension: Acting on Key Factors*. The symposium was conducted online on 12 April 2021 as part of the joint European Society of Hypertension (ESH)/International Society of Hypertension (ISH) meeting, ON-AIR. This symposium was the first of its kind in that a patient joined the physicians to share their knowledge and experience. This report provides a summary of the discussions at the symposium and the relevant evidence supporting this discussion, focusing on three key elements: (1) lack of awareness—patients

are not aware of the silent killer that is hypertension; (2) adherence to antihypertensive medication, which is often overlooked; and (3) therapeutic inertia, which also influences the first two factors.

Patient perspective—hypertension awareness and diagnosis

Michael Kavanagh

"It wasn't a surprise when I was diagnosed with hypertension. I was aware of hypertension as a condition from an early age, as my mother had hypertension from her early 40s. When I was in my 40s, I started getting my BP measured annually. The measurement always had to be taken a few times, and I realized I bordered on hypertension, but I got the impression the physician didn't want to prescribe medication unless absolutely necessary. However, I was aware the day might come when medication would be prescribed. When I retired, I attended fitness classes (run by the West of Ireland Cardiac Foundation). There, I got a wider perspective on hypertension and how diet and exercise can have an impact on it. On two occasions, I had 24-hour BP monitoring, which was sent to my own physician, and a few years later we decided I needed to take antihypertensive medication. An important point for me was an awareness and appreciation of the positive role exercise and diet could play towards controlling the condition."

2 Improving Awareness and Diagnosis

Elevated BP remains the biggest contributor to the global burden of disease and to global mortality, with raised systolic blood pressure (SBP) leading to 10.8 million deaths each year [5], equating to about 30,000 deaths per day.

Awareness and diagnosis of hypertension varies between countries. The multinational PURE (Prospective Urban Rural Epidemiology) study [6] showed differences in awareness, treatment, and control of hypertension according to country income and various other factors among 57,840 people with hypertension. Overall, only 46.5% of participants with hypertension were aware of their diagnosis, with the highest awareness among upper-middle income countries (52.5%), followed by high-income countries (49.0%), low-middle income countries (43.6%), and low-income countries (40.8%) (Table 1) [6]. Importantly, the majority of patients with hypertension did not know they had raised BP.

Table 1 Hypertension awareness according to country income level, sex, and region in people with self-reported hypertension (either treated or with blood pressure $\geq 140/90$ mmHg) Adapted with permission from Chow et al. [6]. Copyright© 2013 American Medical Association. All rights reserved

Factor	Overall number included	Awareness rate (%)
Income level		
HIC	6263	49.0
UMIC	18,123	52.5
LMIC	10,134	43.6
LIC	10,185	40.8
Sex		
Women	32,649	50.4
Men	25,191	41.4
Region		
South Asia	9751	40.4
China	18,915	41.6
Malaysia	5321	48.3
North America and Europe	8682	51.0
Middle East	2074	52.5
South America	10,937	57.1

HIC high-income countries, *LIC* low-income countries, *LMIC* low-middle-income countries, *UMIC* upper-middle-income countries

More recent data show a similar pattern [2, 7]. The Non Communicable Disease Risk Factor Collaboration reported considerable variations in awareness by country and by sex among high-income countries, with the highest level of awareness found among German women (87%) and the lowest among Irish men (46%) [2]. A survey of 192,441 adults with hypertension in 44 low- and low-middle-income countries found that 73.6% of participants had ever had their BP measured and 39.2% had been diagnosed with hypertension [7]. In this report, although results in all four regions reflected poor detection and management of hypertension, Latin America and the Caribbean performed the best and sub-Saharan Africa the worst regarding the proportion of individuals who attained each step of the four-step cascade of care: (1) had ever had BP measured, (2) were diagnosed, (3) had received treatment with antihypertensives, and (4) attained BP control [7].

May Measurement Month (MMM) was initiated worldwide by the ISH in 2017. MMM is a large BP screening campaign based on convenience sampling with the aim of

helping to raise awareness among the general population and potentially among health policy makers and thus help to address the burden of disease caused by hypertension [8]. MMM took place for the first time during May 2017 [8], and the number of individuals screened, and the number identified as having hypertension has increased annually since then [9–11]. MMM is promoted widely, including by celebrity endorsement and TV coverage of local celebrities who have hypertension, advertising in scientific journals, awareness marches, street plays, engagement of rural community leaders, and endorsement from government health officials. BP screening is undertaken in a wide range of situations other than the doctor's office, including places of worship, marketplaces, community spaces, universities, pharmacies, supermarkets, factories, and even on people's doorsteps. MMM 2017 was the largest synchronized, standardized, multinational screening of any risk factor ever conducted and was the largest BP screen ever to take place in 34 of the 80 participating countries, according to feedback from those countries [9]. By 2019, after three annual campaigns, MMM had identified almost 1 million people with untreated or inadequately treated hypertension, at a central cost of only \$US0.65 per case of untreated or uncontrolled hypertension identified and \$US0.14 per participant screened [10].

A Servier-sponsored awareness campaign on social media—“#Checkyourpressure #BecauseIsayso”—was developed to motivate more people to check their pressure and to attend the MMM screening centers, and that has now been in place for two MMM campaigns (2018 and 2019). MMM 2020 could not go ahead because of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) pandemic, but MMM has returned in 2021 albeit modified as “M(a)y Measurement Month.” This reflects the difficulties in some countries of carrying out BP screening in May 2021 because of the pandemic. Hence, MMM 2021 can take place any time between May 1 and November 30, and over 90 countries have signed up to take part this year.

In summary, since its inception, MMM has screened more than 4.2 million people from > 100 countries and will continue to provide a temporary annual substitute for systematic BP screening, which is not available in many places in the world.

Patient perspective—treatment initiation*Michael Kavanagh*

“When I was first prescribed antihypertensive medication, I thought it might be for the short to medium term. Perhaps it should have been made clear that it would be an ongoing process. I quickly developed a side effect of the medication and had to return to the physician to change it. Some months later, a BP check showed that the new medication was not sufficiently effective. As a consequence, the dose was doubled, and when this proved ineffective, the medication was changed. Over the last 2 months, I have had three 24-h BP monitors applied, so we are still tweaking 3 years on. It needs to be made clear, when medication is initiated, that it is different to, for example, antibiotics in that you do not see an immediate clinical benefit, and you do not necessarily feel any better. While I had no problems with adherence, there was a difficulty in arriving at the correct medication and dosage, and I am still not sure that the correct medication/dosage has been arrived at. The whole process is much more interactive than I thought it would be and I am not sure that this is generally understood.

For a lot of people, hypertension may not be the reason that brings them to the physician, rather, the hypertension is identified as part of a general medical examination. When hypertension is identified, patients should be advised by their physician that treatment will

- Be an ongoing process,
- Be long term,
- Not necessarily effect a sense of improvement in general health
- Will probably need to be adjusted initially and over time.

3 Addressing Therapeutic Inertia and Improving Adherence

3.1 The Clinician’s Point of View

The 2018 ESH/European Society of Cardiology (ESC) guidelines [3] and the 2020 ISH guidelines [4] identified the following key factors involved in suboptimal BP control: low patient adherence to treatment, therapeutic/physician inertia, inadequate use of combination therapies, overly complex treatment regimens involving multiple pills, and lack of integration of healthcare professionals within healthcare systems [3, 4].

“Adherence” describes whether patients take their medications as prescribed and may relate to initiation, implementation, and discontinuation [12]. “Clinical inertia” refers to healthcare providers not initiating or intensifying therapy appropriately when patients have uncontrolled parameters [13] and, conversely, as the failure of physicians to stop or reduce therapy when it is no longer needed [14]. In other words, clinical inertia is recognition of the problem but failure to act [13].

In some situations, inaction is appropriate. In the context of primary care, Lebeau et al. [15] distinguished “appropriate inaction” from “inappropriate inertia.” In their definition,

inaction (i.e., not initiating or intensifying antihypertensive treatment for a patient not at their relevant BP goals) was appropriate if any of the following factors were present: elevated BP had not been confirmed by self-measurement or ambulatory BP monitoring, legitimate doubt about the reliability of BP measurements, adherence issues regarding pharmacologic treatment, a particular adverse effect was present that changed the risk–benefit balance (e.g., an adverse effect of medication, orthostatic hypotension), a more important medical priority, or difficulties in accessing treatment [15]. If none of these factors were present, inaction was described as inappropriate inertia.

Lack of adherence is complicated, with the World Health Organization describing five dimensions contributing to nonadherence: social/economic and patient-related, therapy-related, condition-related, and healthcare system-related factors [16]. While these multiple drivers of nonadherence make addressing the issue more complex, they also provide many opportunities to act and address nonadherence. Poor adherence may be intentional (i.e., the patient actively chooses not to follow treatment recommendations or take their medication) or unintentional (i.e., unplanned nonadherence, such as forgetting to fill the prescription or take the medication) [17]. Therefore, intentional nonadherence is a reflection of the patient’s internal attitudes and beliefs, whereas unintentional nonadherence is usually mediated by external factors, such as socioeconomic/geographic factors and family support or health issues outside of the patient’s control, such as dementia [17].

The impact of poor adherence in hypertension includes suboptimal control of BP, more cases of severe hypertension, more preventable complications of hypertension (e.g., stroke, myocardial infarction or heart failure), more hospitalizations and premature deaths, more clinical visits, and increased costs of hypertension management [16]. So, addressing nonadherence is a “win–win” situation for everybody.

A Dutch study assessed therapeutic inertia in primary care and showed that, of 6400 patients with uncontrolled hypertension on one or two BP-lowering drugs (10% of the hypertensive population of the survey), therapeutic inertia occurred in 87% of cases and was similar in men and women [18]. Inertia is more likely when BP is near target than when it is very poorly controlled [18]. Interestingly, the reasons for not intensifying antihypertensive treatment in primary care have not changed in 15 years, as shown by studies conducted in 2004 and 2021 [18, 19]. Reasons given in both studies included having to repeat BP readings, lifestyle advice not followed by patients, patient’s BP < 140/90 mmHg at home, patient chose not to have their medication intensified, and, finally and very frequently, the patient’s BP was near target [18, 19].

Major causes of clinical inertia are also affected by patient factors, including denial of the disease, lack of health literacy, medication issues (such as adverse effects or cost), and poor communication with or lack of trust in their physician [20].

The recent 2018 ESC/ESH and 2020 ISH guidelines proposed several interventions that may improve drug adherence in hypertension (Table 2). At the physician level, the most important task is to provide information on the risks of hypertension and the risks and benefits of treatment as well as agreeing on a treatment strategy to achieve and maintain BP control. A shared decision-making process should be implemented, encouraging the patient to share in clinical decisions, providing them with feedback on behavioral and clinical improvements, and assessing and resolving individual barriers to adherence. Collaboration with other

healthcare providers, especially nurses and pharmacists, is also important. Treatment-related factors can be addressed through the simplification of the drug regimen favoring the use of single-pill combinations (SPC) over free equivalent combination (FEC) therapy. In a 2021 meta-analysis of clinical studies addressing the impact of SPC on adherence, persistence, and BP control, over 80% of the 23 included studies found either a significant or numerical improvement in medication adherence with SPCs over FEC therapy, and almost 90% of 16 included studies showed a significant improvement with SPC over FEC in medication persistence (Fig. 1) [21]. Furthermore, significantly more patients achieved target BP when treated with SPCs compared with FECs in one-third of studies [21]. There was a numerical improvement with SPC in 44% of studies, the percentage of patients achieving BP targets was similar in 11% of studies, and an

Table 2 Physician and drug treatment interventions that may improve patient adherence to antihypertensive treatment Adapted with permission from Williams et al. [3]

Physician level	Drug treatment level
Provide information on the risks of hypertension and the benefits of treatment	Simplify the drug regimen favoring the use of SPC therapy
Agree a treatment strategy to achieve and maintain BP control	Reminder packaging
Share the decision process	
Empower the patient; share decisions	
Give feedback on behavioural and clinical improvements	
Determine and resolve individual barriers to adherence	
Collaborate with other healthcare providers, especially nurses and pharmacists	

BP blood pressure, SPC single-pill combination therapy

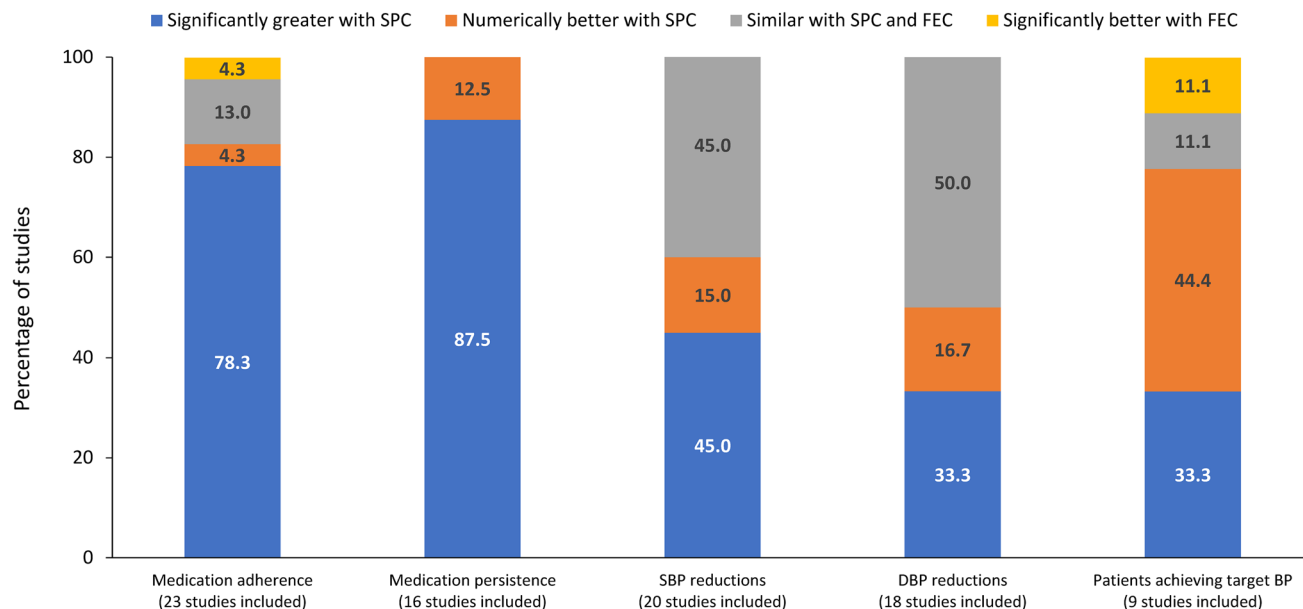


Fig. 1 Impact of single-pill combination (SPC) therapy and free equivalent combination (FEC) therapy on medication adherence and persistence, systolic blood pressure (SBP) and diastolic blood

pressure reductions (DBP), and on achievement of target BP levels Adapted with permission from Parati et al. [21]. © 2020 American Heart Association, Inc

improvement with the FEC therapy was reported only in 11% [21].

Strategies that can be implemented to limit clinical inertia are quite similar to those addressing nonadherence [20]. For example, educational courses and decisional aids can help overcome lack of knowledge, whereas peer influence and advice from opinion leaders can influence beliefs and attitudes [20].

The psychology and attitudes of inert physicians are similar to those of nonadherent patients. Reach [22] described it thus: “The inert physician prefers the apparent safety of immediate inaction to the long-term benefits of treatment titration, which, in their mind comes with immediate difficulties and potential side effects.” This frequently mirrors the thinking of nonadherent patients who prefer to stay in their current situation and can be skeptical or worried about new treatments and possibly new adverse effects; they would rather remain uncontrolled for a few years.

Patient perspective—medication issues

Michael Kavanagh

“Recently, we had a situation where my medication was checked for another medical reason. If this had not occurred, then my physician and I might well have entered a state of inertia. I underwent BP monitoring three times, and this resulted in three medication changes: a discontinuation of one of my two medications, discontinuation of medication entirely, and, finally, re-starting with one of the two initial medications. I am prepared to tweak things in order to get a better long-term outcome, although I am not convinced that we are at an optimal state as yet.”

3.2 Perspectives on Health Literacy and Patient Involvement

Patients are ultimately responsible for their own health, and physicians respond positively to patients who are proactive. However, suboptimal health literacy and lack of patient involvement in the treatment decision-making process have been identified as factors contributing to nonadherence with antihypertensive medication [23]. To rectify this, education

and communication regarding the nature and control of hypertension should be undertaken. Such education and communication would be based primarily on the interaction between the patient and the physician, but national health authorities would also act to increase knowledge about hypertension and its implications in the general community.

The education and communication process could begin at an early stage of the patient–physician relationship and before hypertension becomes an issue. A regular part of any visit to a physician is BP measurement. Almost invariably, at a young age, the reading is deemed to be satisfactory, with no further action being required. However, the taking of the reading provides an opportunity for the physician to briefly educate the patient about BP and hypertension (Table 3). Ideally, and if time permits, the patient would then have the opportunity to ask questions about BP.

While appreciating the time constraints on physicians, the acquisition by the patient of some general information on hypertension at this early stage, before the condition becomes an issue, will provide an information base on which to build should the condition develop at a later date.

If hypertension does develop, there is a further and more pressing opportunity for the physician to educate and inform the patient by taking them through the details of the BP measurements, with reference to their peaks and troughs, day- and night-time measurements, and average measurements. The patient should then be advised as to their target BP, noting that there is some variation in BP over the course of a regular day, so more than one measurement is needed to determine whether or not the target is being achieved. Discussion should take place on how the target BP might be achieved. Patients should be encouraged to engage in a holistic treatment plan combining diet, exercise, relaxation, sleep, and medication—in other words, a 24-h regimen—rather than focusing on medication only. The patient should be advised on how their progress towards the achievement of the target BP will be measured.

The basis for the decision to prescribe medication should be made clear to the patient. They should be clearly and unambiguously informed of the potential adverse implications of the condition. Reference should be made to possible

Table 3 Information that physicians can impart to patients when they take a blood pressure reading

Why the BP reading was taken
What information the reading provides
What is deemed to be a satisfactory reading
How informative a one-off reading is
Hereditary and lifestyle factors that might impact on BP levels
The potential adverse consequence of persistently elevated BP levels
Lifestyle changes that might mitigate the likelihood of the patient having hypertension in the future

BP blood pressure

reasons for the development of hypertension, with discussion of and advice about possible lifestyle changes that might assist in its control [3, 24].

In addition, the patient should be advised that, during the first weeks, they may not feel better as a result of taking the medication, but that it is important to adhere to the treatment regimen to mitigate the risks of hypertension. Patients need to realize that the condition may be asymptomatic (i.e., a “silent” condition), but it is not benign, and lifelong treatment is required to minimize the risk of potentially serious cardiovascular outcomes. Physicians should ask the patient to report on their level of adherence, identify factors that might hinder adherence, and suggest how these factors might be mitigated. Patients should be advised that medications may need to be tweaked or changed to optimize outcomes or to accommodate changing health needs. Physicians need to encourage patients to bring any adverse effects of the medication to their attention, and advise them as to where they can obtain more information on the condition by providing relevant leaflets, appropriate websites, and information on groups and organizations that support appropriate lifestyle changes. Physicians and patients should also discuss the need for ongoing monitoring and the timetable for further checks. Such ongoing BP measurements should preferably include 24-h monitoring or home BP readings, depending on the supply of monitors and the patient’s willingness to engage in the monitoring process.

Recent research also highlighted the importance of understanding what patients with hypertension want to know about their condition to better address their information needs and provide tailored health messages. A study conducted in 271 patients with hypertension in an Italian healthcare center [25] found that patient information needs and patient coping strategies (i.e., how patients manage the stressors related to disease) were related. The authors suggested that taking into account patients’ coping strategies might be helpful in refining and tailoring the health information given by physicians to their patients. Moreover, the same group reported that patient information needs evolved over a period of 24 months [26]: patients became less interested in information on disease pathology and self-management but continued to be interested in information on drug treatment and complications. Regarding information sources [26], patients initially received information mostly from physicians, relatives, and television; although the perceived relevance of the latter two decreased with time, it is worth noting the influence of these additional information sources.

In summary, patients should be encouraged to become a partner in a comprehensive and collaborative approach to BP control rather than being a passive recipient of a prescription, and treatment should be multifaceted rather than one dimensional. At the general population level, national health agencies should build on the experience gained during the

SARS-CoV2 pandemic in communicating public health information to provide the general public with information on standard health conditions, including hypertension, and their treatment. A better understanding of patient information needs would facilitate the delivery of tailored and thus hopefully more effective information on their condition. Finally, interventions by community nurses with social and community groups frequented by older citizens, and the resultant development of peer support groups, might improve adherence rates.

3.3 The Psychological Impacts of Patient Preference—Bringing it All Together

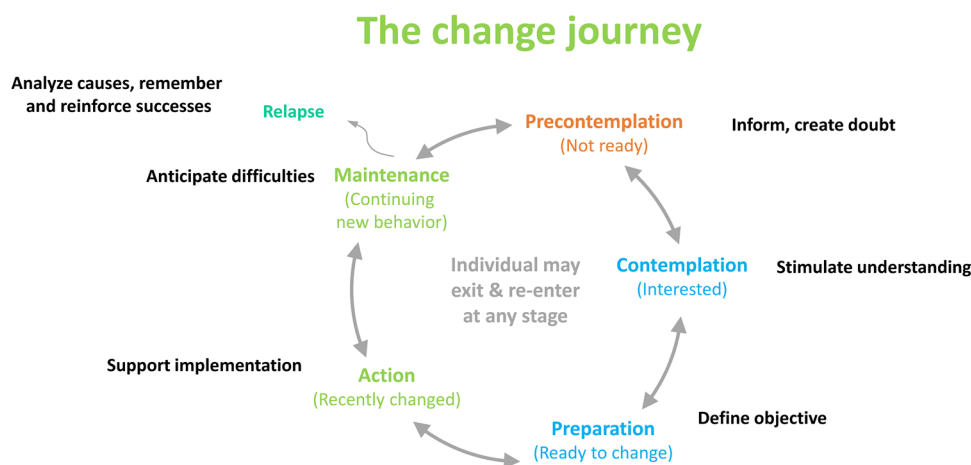
Reducing resistance to treatment in any chronic condition is key to tackling therapeutic inertia and improving treatment adherence. The following factors are critical to achieving this: (1) determining the patient’s readiness to change, (2) ensuring that any approach is patient centered, and (3) using motivational interviewing.

3.3.1 Is the Patient Ready to Change?

The first step to patient–physician collaboration is to align perspectives. The physician’s perspective may consist of controlling BP numbers and the impact of hypertension on morbidity and mortality. However, this does not necessarily match with what patients are thinking. Yet, the difficulty is to ensure that treatment goals are aligned when patients spend such a short amount of time at each doctor’s consultation. According to one UK analysis, the average time spent by general practitioners (GPs) on hypertension-related consultations was 7.94 min per patient per year [27]. Improving the quality of care without increasing the burden for GPs is an important goal, and steps should be taken to achieve this, including engaging other health professionals (e.g., nurses) in BP monitoring and hypertension education (task sharing), using home-based monitoring devices to confirm the diagnosis, and encouraging patients to actively monitor their own BP through self-management support systems [27–29].

Coping with a healthy behavior (adjusting to and acting on symptoms) and strictly following a physician’s prescription for the rest of their life can be described as an abnormal behavior [30]. It is difficult to stick to health advice, particularly if the idea did not originate from the patient themselves. This was demonstrated by Prochaska and Di Clemente [31], who described a cycle of patient readiness to change behavior after they had been exposed to the loss of a person (mourning process). The cycle consists of several stages, from pre-contemplation (or denial), followed by contemplation (“I’m ready to change *but* not now”), to preparation for change, and finally, action.

Fig. 2 The patient's change journey, and how each stage can be addressed Adapted from Prochaska and DiClemente [31]



There are ways to address each step in this cycle and adapt the proposal to the stage of the patient; if a patient is not ready, the physician can inform and give factual information. Conversely, if the patient seems ready to change but is hesitant, they can be encouraged to enter the preparation and action phase (Fig. 2).

Why is it so difficult for individuals to change their behavior towards more healthy habits? The answer is that decision making has a strong emotional component [32], and logical arguments are not always sufficient to persuade a person of the need to change. Resistance to change is normal; we need to understand that saying “no” is more natural than saying “yes.” In the context of physician–patient interactions, linking a patient’s health concerns and their health behaviors generates variable responses and often displays of resistance [33]. Even after experiencing a life-threatening illness such as myocardial infarction, patients do not follow their physician’s advice. For example, in the EUROASPIRE studies, 50% of smokers were still smoking 6 months after experiencing an acute coronary syndrome [34, 35].

To address this, we must take a patient-centered approach, in which the patient and physician develop a consensus or a shared approach to treatment [36].

This can and should be applied to poor adherence. Patients often prefer not to take medication, with almost 50% of patients found to have discontinued treatment within 1 year of initiation [37]. Indeed, ~ 30% of young (mean age 40 years), relatively healthy adults working in a healthcare setting would accept that they may die early rather than take lifelong polypharmacy [38]. This percentage may be lower in elderly patients with many comorbidities. But patients who prefer active or shared decision-making styles are more likely to be adherent [39]. Decision-making preference and thus adherence are also influenced by the length of patient–provider relationship [39]. Patient preference is therefore influenced by trust in the physician, satisfaction

with care, and confidence in the treatment decision. The physician must try to motivate their patients and must ask the patient about their expectations and perspectives of risk.

In conclusion, if physicians want to change their patients’ behavior, they must ask, listen, summarize, and invite them to share the treatment decisions, bringing the patient and physician together. Hypertension control is not just about prescribing drugs but about a medical alliance and taking actions to support adherence: guiding, supporting, and listening to our patients.

4 Concluding Remarks

This symposium identified many factors that must be addressed to improve management of hypertension, including tackling lack of awareness, since undetected hypertension cannot be treated. The MMM initiative by the ISH is helping to raise awareness around the world. Therapeutic inertia and nonadherence are also important issues, and the ESC/ESH has a dedicated group working on adherence, which will go some way to help address these issues.

5 Questions and Answers

Question: *Is there an expectation that the MMM will continue to identify more patients with hypertension each year?*

Answer (Neil Poulter): While over 90 countries are signed up to MMM 2021, the coronavirus disease 2019 (COVID-19) pandemic could still have a significant impact on this program. As described earlier, in 2021, the time-frame for MMM has been extended from a single month to the 6 months between May and November to maximize

participation. However, the impact of the COVID-19 pandemic on the amount of data that will be gathered remains to be seen.

Question: *We know that persistence with treatment declines over time, but many patients do not even fill the first prescription. How can we improve this aspect of adherence?*

Answer (Michel Burnier): This is a very important point. A survey in the USA showed that 20–30% of new prescriptions are not filled by patients [40]. Initiation of treatment is probably related to the affordability of and access to the drug so may be less of a problem in countries where medications are subsidized or reimbursed. One strategy which improved initiation in the USA was the use of electronic prescriptions [41], where the prescription goes directly to the pharmacies. Feedback from the pharmacy may be needed to determine whether the patient has filled their script. However, very few studies have focused on nonadherence to treatment initiation.

Answer (Atul Patak): Another issue affecting initiation is the high proportion of patients who are in denial. They are not yet ready for medication and will not get their pills straight away. A practical strategy is to accept that the patient will not fill the prescription but invite them back within the next 1 to 3 months and give them more information in order to nudge them to the next stage in the cycle of change.

Question: *When do patients with hypertension think they should be seen by their physician?*

Answer (Michael Kavanagh): Most patients are hoping for a “quick fix,” but that doesn’t work with hypertension, which needs consistent ongoing monitoring. Some physicians are very busy and ask patients to come back after 6 months or a year. I suggest that visits should be more frequent than that, especially in the early stages when medications and dosages are still to be decided upon.

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Declarations

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Conflicts of Interest M. Burnier has received honoraria and research grants from Servier, Menarini, Bayer, Idorsia, and Vifor Pharma. N. Poulter has received financial support from several pharmaceutical companies that manufacture BP-lowering agents for consultancy fees (Servier), research projects and staff (Servier, Pfizer), and arranging and speaking at educational meetings (AstraZeneca, Lri Therapharma, Napi, Servier, Sanofi, Eva Pharma, and Pfizer). He holds no stocks or shares in any such companies. A. Pathak was a speaker at the symposium and is President of the European Society for Patient Care and President of the French Society of Hypertension. M. Kavanagh was a speaker at the symposium as a patient advocate for hypertension on behalf of the Global Heart Hub Association, which received the funding from Servier. R. Kreutz has received honoraria for consultancy and lectures and support for research from Bayer Pharma, Berlin-Chemie Menarini, Daiichi Sankyo, Ferrer, Sanofi, and Servier.

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Consent to participate Not applicable.

Consent for publication Not applicable.

Availability of data Not applicable.

Code Availability Not applicable.

Author contributions N. Poulter collated the slides that formed the basis of the text relating to MMM, of which he is the Chief Investigator, and read and approved drafts of this manuscript. A. Pathak contributed to the adherence and inertia section of the manuscript and revised and approved each draft. M. Burnier made a significant contribution to the adherence and inertia part of the manuscript and contributed to the revisions of the manuscript. M. Kavanagh read and approved drafts of this manuscript. R. Kreutz was a moderator of this ISH/ESH symposium and revised and approved drafts of this manuscript.

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