

**World Dementia
Council** Leading the Global Action
Against Dementia

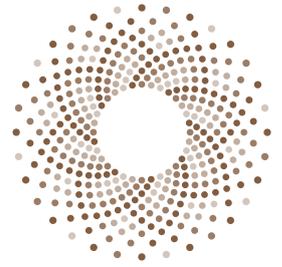
Global dialogue on prevention: Transcript

The dementia landscape
project

9 February 2021

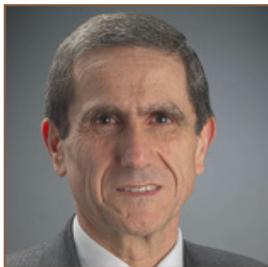


Co-chairs



Professor Kaarin Anstey

Kaarin Anstey is a professor of psychology and conducts public health research into dementia risk reduction ranging from analysis of cohort studies, development of risk assessment tools, and conducting risk reduction trials. Kaarin is the director of the University of New South Wales Ageing Futures Institute and is a conjoint senior principal research scientist at Neuroscience Research Australia. She chairs the International Research Network on Dementia Prevention and is a member of the governance committee of the Global Council on Brain Health, an initiative supported by AARP and Age UK.

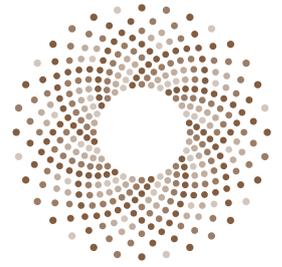


Professor Philippe Amouyel

Philippe Amouyel is general director of Fondation Alzheimer (France), professor of epidemiology and public health at the University Hospital of Lille, and a member of the World Dementia Council. Since 1998, he has headed a research unit of 110 people dedicated to public health and the molecular epidemiology of age-related diseases. He has published more than 850 scientific articles and participated in the discovery of 90% of the confirmed genetic loci predisposing to sporadic Alzheimer's disease. At the European level, Philippe also chairs the European Joint Programming Initiative on Research on Neurodegenerative Diseases (JPND) and Alzheimer's in particular. The main objective of JPND is to combine the strength of European and global research to tackle these diseases more efficiently.



Speakers



Professor Carol Brayne

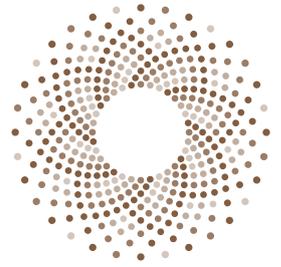
Carol Brayne CBE is a Professor of Public Health Medicine and Co-Chair of the Cambridge Public Health Interdisciplinary Centre at the University of Cambridge. She is a medically qualified epidemiologist and public health academic. Her main research has been longitudinal studies of older people following changes over time with a public health perspective and focus on the brain. She is lead principal investigator in the MRC CFA Studies and other population based studies and has played a lead role in teaching and training in epidemiology and public health at Cambridge University. She is a Fellow of the Academy of Medical Sciences and an NIHR Senior Investigator Emeritus.



Dr Michele Cecchini

Michele Cecchini is responsible for the programme on Public Health at the OECD – the Organisation for Economic Co-operation and Development. Michele’s research interests include priority setting and programme evaluation of policies influencing population health. He is the editor, author and co-author of a large number of publications on the economic aspects of public health, including the recent OECD flagship publications on antimicrobial resistance, overweight and alcohol. Michele represents OECD in the board of the Global AMR R&D Hub and holds a position of adjunct professor in applied health economics at the School of Public Health of the University of Siena (Italy). Previously, he held a visiting position at the Duke-NUS Graduate Medical School in Singapore and served as a temporary advisor to a number of government and international agencies, including WHO, IARC, EC and the World Bank. After obtaining a degree in Medicine and Surgery from the University of Genoa, Michele completed his specialist training in Public Health at the University of Siena. He also obtained a master’s degree in Health Policy, Planning and Financing from the London School of Economics and the London School of Hygiene and Tropical Medicine and a PhD from Imperial College London.





Dr Yoshiki Niimi

Dr Yoshiki Niimi is a special appointed lecturer at the Unit for early and exploratory clinical development, University of Tokyo. Dr Niimi participates in the Japanese TRC-PAD (J-TRC) and the DIAN-Japan as a site PI at Tokyo university. He had worked at the Ministry of Health, Labour, and Welfare Japan as a senior specialist for dementia from 2012 till 2015. During that period, the G8 Dementia Summit and serial legacy events were held. He played a pivotal role in promoting the Global Dementia Legacy Event Japan and formulating the Japanese national dementia plan or 'New orange plan'. By utilizing this experience, he serves as the Vice-chair of the Social problem committee of the Japan Society for dementia research.



Lenny Shallcross

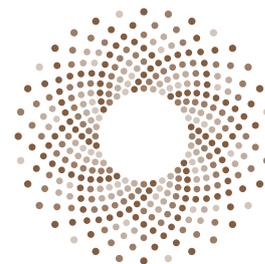
Lenny Shallcross is executive director at the World Dementia Council. Prior to that he was Head of Community Engagement leading programmes across the UK to establish Dementia Friendly Communities. This includes the Dementia Friends programme which is the biggest health social movement campaign delivered by 10,000 volunteers that have recruited 2 million individuals through a community, digital and corporate offer. Before working for Alzheimer's Society he worked in the UK government as a political adviser at DCMS and the DoH, as well as working in Parliament and for the Labour Party.



Global dialogue on prevention

Tuesday 9 February 2021

07:00 - 08:30 GMT	London
08:00 - 09:30 CET	Central Europe
12:30 - 14:00 IST	New Delhi
16:00 - 17:30 JST	Tokyo
18:00 - 19:30 AEDT	Sydney



Discussion transcript



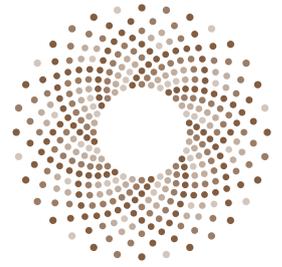
Lenny Shallcross
Executive director, World Dementia Council

Welcome everyone. I am Lenny Shallcross the Executive Director of the World Dementia Council. I realise that many of you have participated in council meetings before. And I am used to welcoming you to a conference somewhere in the world. So, it is fundamentally unusual but now normal to be welcoming you to my sitting room on what is a cold and dark day in London. But there you go.

So for those of you who have not attended these meetings before the Council was established following the London Dementia Summit that was hosted in 2013 by the UK government as part of their G8 presidency. The Council was established after the meeting with the purpose of supporting and challenging the international community to deliver on the commitments that were made at the summit.

The Council is chaired by Harry Johns who is President and CEO of Alzheimer's Association in the US. There are 24 members., which includes Phillipe who is one of the co-chairs today Alongside them there are a number of government associate members and WHO and OECD are members.

As you know, at the London summit governments committed to make progress in research, care, awareness and risk reduction. This year the Council is producing a report evaluating the progress that has been made in those four themes. Where we have come from, where we are and what needs to happen.



As part of this work, we are holding a number of different workshops to inform this report. This being one of them. At each of these roundtables that we are holding we have brought together a range of global experts working in the field to share their insight and thinking. After this meeting we will circulate to you a transcript of the discussion including a transcript chat function. We will produce a number of essays from individuals reflecting the themes that we have covered. And finally, we will share with you and invite your input on the prevention chapter of the report that we will be producing later this year.

Before I introduce the co-chairs of today's meeting just a couple of points. I am sure by now we are all used to muting and unmuting. As you can see on the screen, we are recording the meeting but that is for the purpose of producing a transcript. You will have received from Josh details of everyone participating in today's conversation and I would encourage you to participate in one form another either live in the meeting or using the chat function.

So, with that, I would like to introduce the co-chairs of the meeting. Professor Kaarin Anstey from the University of New South Wales and she is professor of Psychology there. And, I've been practicing my French to get this right, Professor Phillippe Amouyel, who is professor of epidemiology and public health at the University of Lille.

So, with my thanks to them both, I would like to hand over to Kaarin.



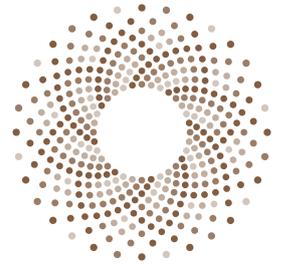
Professor Kaarin Anstey

Professor of psychology and director, University of New South Wales
Ageing Futures Institute

Thank you. Well hello everyone and many thanks for attending this webinar it is great to see you all here. And I thank Lenny and the World Dementia Council for organizing this very important and timely discussion. And I would like to thank Philippe my co-chair. Before I introduce the speakers, I would like to make some introductory remarks about the landscape. I decided not to use slides so I am just talking from notes tonight!

We are living in very exciting times for public health research in the field of dementia, covid-19 aside. And I stress public health because it may be argued that the power of public health for transforming the future dementia landscape has not yet been fully harnessed and the importance of this area is now coming of age in terms of recognition among governments, industry and the community. And many of us here can remember a time when the prevailing view, perhaps about twenty years ago, was that dementia could not be prevented either at an individual or population level.

At the individual level I really prefer to talk about risk reduction rather than prevention because we can't yet predict with strong certainty whether an individual can avoid dementia through preventive interventions. But that day may come as we continue our research. However, at the population level our field is now at a very exciting juncture because we can and do talk about dementia prevention. We can measure this in terms of reduction of incidence of dementia in a population and we know that this has indeed occurred in some settings.



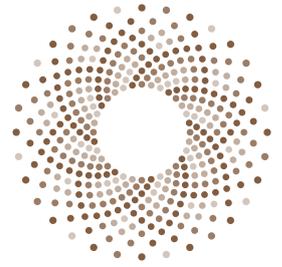
Population prevention may be due to a delay in the onset until older ages or simply fewer individuals developing dementia. And we are also increasingly recognising that dementia risk reductions leads to better outcomes across a number of indicators of healthy ageing. And we have seen that with the FINGER trial with the intervention group having fewer multiple chronic diseases and less impairment in IADLs

So, it is timely to reflect the state of our science as we enter into this webinar. In the last few years, we have had several major publications that have consolidated a huge amount of evidence on risk reduction. And these include several umbrella reviews – an umbrella review is a review of reviews and the fact that we can conduct these signifies that there is a substantial volume of research now in the field. And these have covered topics such as effect sizes of a range of risk factors from observational studies, the efficacy of pharmacological and non-pharmacological interventions to reduce risk factors, the quality and quantity of risk factor evidence and the geographical distribution of evidence. And we have the incredibly influential Lancet Commission report led by Professor Gill Livingstone who is a participant in our meeting today, the US Academy Report, and the WHO guidelines for the risk reduction of cognitive decline in dementia. And the WHO guidelines have importantly also linked goals for dementia risk reduction to other global goals on chronic disease and healthy ageing and are a key element of the implementation of the Global Action Plan for the public health response to dementia.

Alongside the publication of large data synthesis projects and guidelines we have seen the development of several global collaborative initiatives on dementia risk reduction that demonstrate high level of consensus and cooperation not only among academics but between academics, philanthropists, government, business and advocacy groups. And I think that is the point where we are tonight. So, examples of these include: the International Research Network on Dementia Prevention; the Global Council on Brain Health which is supported by AARP and Age UK; there are the Professional Interest Areas (PIAs) comprising scholars from around the world supported by the Alzheimer's Association in the US that actively focus on clinical trials and non-pharmacological approaches to risk reduction; there is the Global Brain Health Institute (the GBHI) which is supported by Atlantic Philanthropy and supports early career fellows and; we have the WW-FINGERS which is an interdisciplinary network of researchers established by Miia Kivipelto to build on the original momentum and findings of the FINGER trial to share experiences, harmonise data and plan international initiatives around the prevention of cognitive decline and dementia.

So that large scale cohort studies and multi-domain trials, such as the WW-FINGER network, that are supported by a range of sources include governments, medical research councils, Alzheimer's associations, philanthropists, and other organizations, I think demonstrate that we have a multi sector wide scale support for dementia prevention research and implementation of the evidence. Dementia prevention is now included in many national dementia action plans, so there is an over readiness for the conversation we will have today.

So, when shaping the conversation today Philippe and I decided to invite three speakers who offer different perspectives on this topic. First Michele Cecchini, Head of Public Health at OECD who will share his thinking on the lessons from other public health initiatives. Then, I shall invite Professor Carol Brayne who is professor of public



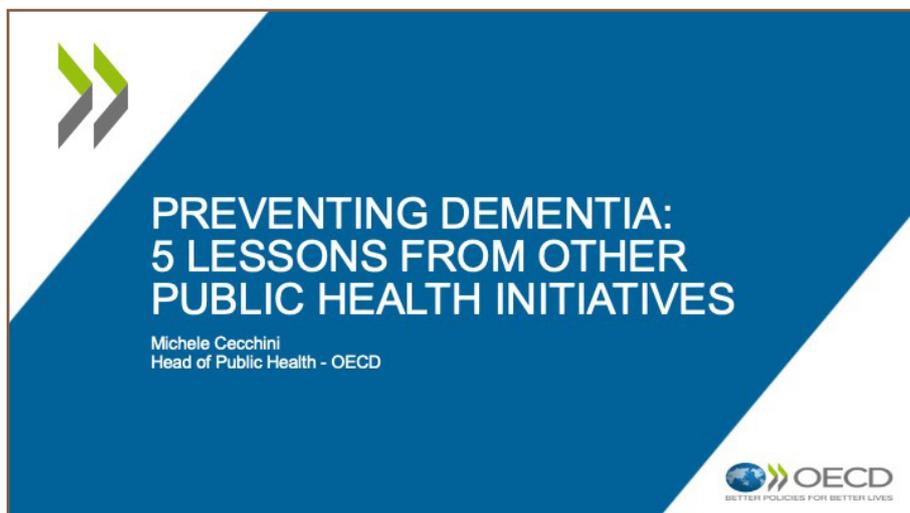
health medicine and co-chair of the Cambridge Public Health Interdisciplinary Centre, University of Cambridge. And finally, Dr Yoshiki Niimi a special appointed lecturer, Unit for Early and Exploratory Clinical Development, University of Tokyo who previously had worked for the government of Japan in establishing their dementia policy.

So, with that I am going to hand over to Michele.

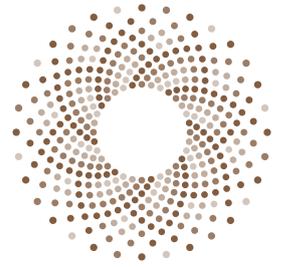


Dr Michele Cecchini
Head of public health, OECD

Thank you very much Kaarin. Good morning and welcome to everyone. Let me start by saying that it is a pleasure for me but also for OECD to participate to this meeting and, more broadly, to be involved in the work of the World Dementia Council. Thanks for inviting us to this event.



Today I am going to discuss with you some lessons from other public health initiatives that may help you better prevent dementia. As introduced by the chair I am responsible for the work on Public Health at the OECD. Our work looks at many diseases including dementia. However, our work goes beyond dementia and I will try to bring this broader perspective into the discussion. Specifically, I shall discuss about five lessons that we have learnt.



1. Very Complex Interactions Underlie Lifestyles, Risk Factors and Diseases, Including Dementia

Preventing dementia: not an easy task

Media consumption
Exposure advertising
Social Psychology
Activity environment
Food offer...
Quality/quant...
Appropriateness
child growth
Food energy density
Rate of eating
Food abundance and variety
Nutrient partitioning
Individual Physiology
Individual psychology
Individual activity
Occupational activity
Stress
Self-esteem
Access to opp...
for activity

An update to the Lancet Commission on dementia prevention, intervention, and care pathways, a new model showing that 12 potentially modifiable risk factors account for around 40% of worldwide dementia.

- Increased BMI is only one of the 12 modifiable risk factors for dementia identified by the 2017 [Lancet Commission on Dementia](#)
- Similar, if not more complex interactions are likely to occur for any risk factor for dementia in environment
- Planning public health action promoting health should consider this multitude of factors to identify priority areas for action

Adapted from Obesity map, Foresight, 2007

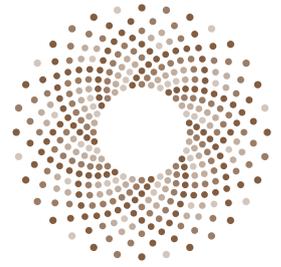
The first lesson is that lifestyles and risk factors as well as the diseases they cause including dementia are the result of very complex interactions. We need to understand these interactions to better prevent diseases and dementia. The graph on the slide shows a simplified version of the original map that was devised in 2007 by the Foresight group. As you can see, energy, balance and BMI are the consequence of a very rich set of factors that include, for example, how we consume food, the environment in which we live, our own physiology and psychology and other determinants.

According to the 2017 paper by the Lancet Commission on dementia, obesity is one of the 12 modifiable risk factors for dementia. We can think that there are very similar, if not more complex, interactions for each of the other 11 risk factors. Planning public health actions to promote health, including to prevent dementia, should consider these multitude of factors to identify priority areas for action and to devise successful strategies.

2. Policy-Makers Have Clear Priorities: You Need To Answer These Questions To Trigger Action

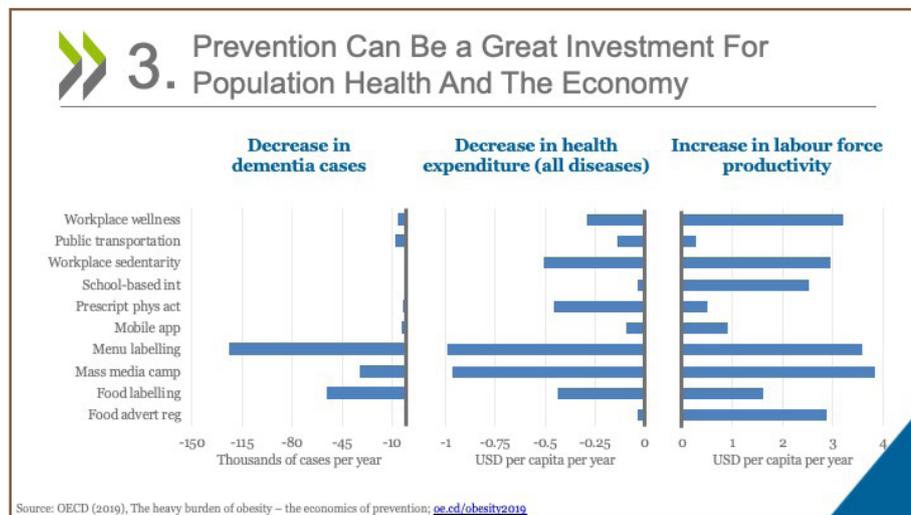
- Does the prevention intervention **improve health**?
- Does it **reduce health expenditure**?
- Does it **improve health inequalities**?
- Is this a **cost-effective** intervention?
- When** will desired effect show up?

The second point I would like to make is that policy makers have very clear priorities and, to make your case to trigger action on preventing dementia you should keep these priorities in mind. Prevention can be considered the Cinderella of health expenditure with about 3% of total health expenditure used for health promotion and prevention.



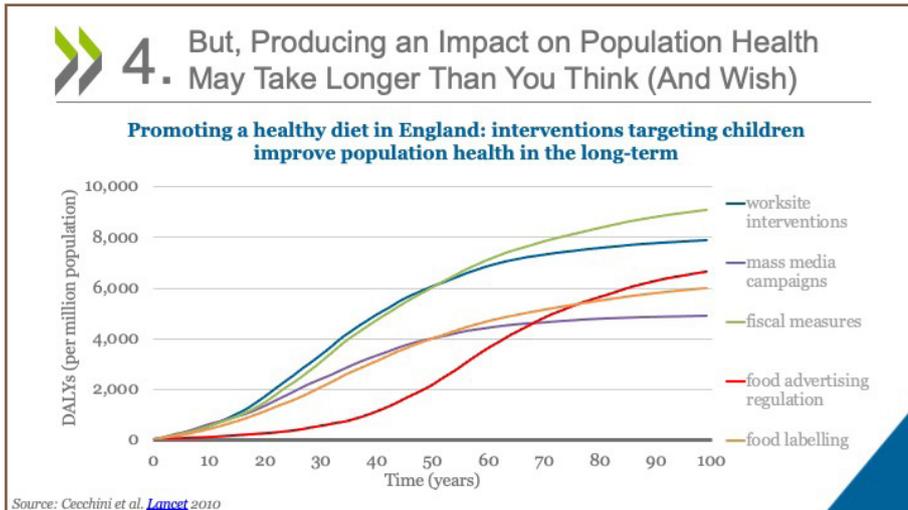
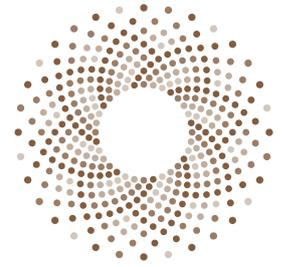
When, almost 15 years ago, Ministers of Health of OECD countries asked the OECD to start working on public health, they were interested in getting better evidence to make the case for investing on prevention. Since then, our work mainly focused on answering the following questions:

- Does prevention intervention improve the population health;
- Does prevention reduce health expenditure;*
- Does it improve health inequalities;
- Is this a cost-effective intervention, what is the return on investment when scaling up action on prevention; and finally
- When will desired effect show up?



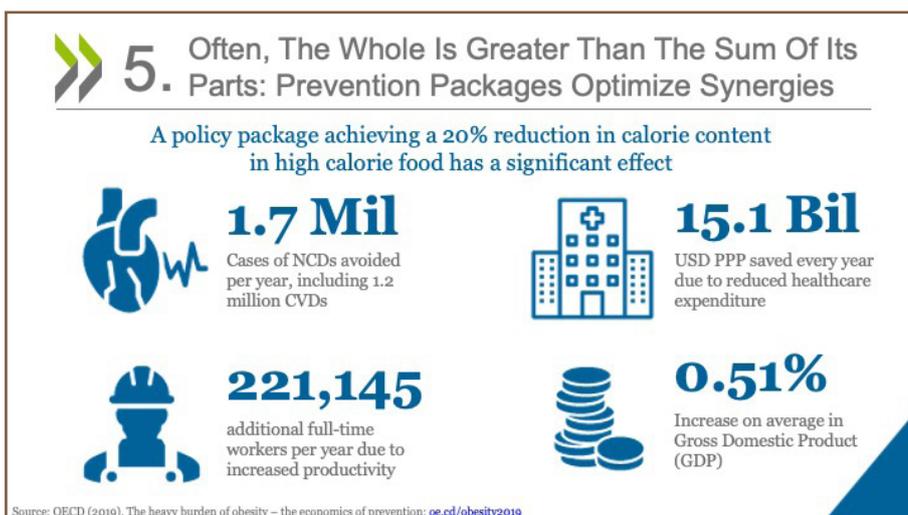
The good news is that prevention can be a great investment for population health and the economy of countries. This slide shows you the impact of a list of interventions for which we have assessed the impact on population health (left), on healthcare expenditure (centre) and on labour force productivity (right). For the impact on population health, I am showing you the decrease in dementia cases that can be expected over a thirty-year period since the scaling up of these interventions.

These graphs show two important messages. The first one is that population-wide interventions tend to have a greater impact compared to interventions that target a particular population group. So, for example, interventions such as labelling and mass media campaigns tend to have the greatest impact. Second, for each intervention, the impact on labour force productivity is generally significantly greater than its impact on health expenditure. The reason is that rather than completely avoiding diseases, prevention pushes diseases towards the end of life, making people healthier and therefore more productive during their working-age.

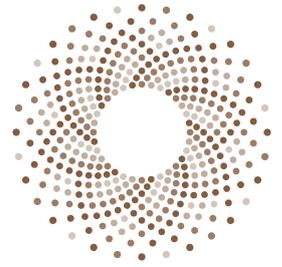


However, in some cases, producing an impact on population health may take longer than what people think and, probably, wish. The graph on this slide shows an analyses focusing on England and looking at the health impact of different interventions over a 100-year timeframe. As it can be seen, interventions targeting children do improve population health, but only in the longer term.

To a large extent results of this slide mirror those of the previous slide in which interventions such as school-based interventions and regulation of advertising had very low impact on dementia over a thirty-year timeframe. This is because these interventions target children that are generally seven to ten year olds. Therefore, to see any impact, there is a need to wait 60 to 70 years to wait for these children to become elderly and at risk to develop dementia. However, as soon as a significant share of the population becomes sufficiently old, this intervention becomes one of the most effective.



The fifth and final point I would like to make is that very often, in public health, the whole is greater than the sum of its parts. Our analyses find that combining interventions into a prevention package optimizes synergies and produces an impact that is bigger than the sum of the single interventions. So, for example, this is the impact of OECD and G20 countries of a policy package achieving a 20% reduction in calorie content in



high calorie food. This is a policy that, for example, the United Kingdom is working to implement and that the G20 discussed a few years ago. Our analyses show that combining interventions such as labelling, regulation, mass media campaigns and other measures to achieve a 20% reduction in calorie content may avoid 1.7 million cases of non-communicable diseases including 1.2 million of cardiovascular disease.

This package of policies would also save USD 15.1 billion per year to the health care budget of OECD and G20 countries and there would be an additional 221,000 full-time workers. All these factors together, including increased labour force, would increase GDP by 0.5%, which is a significant impact accounting for the fact this is just a prevention policy.

OECD Work on Public Health
Stay Tuned, Much More To Come Out Soon!

Healthy people, healthy planet

OECD Health Policy Review
The Heavy Burden of Obesity

OECD'S SPHeP MODELS
A TOOL TO INFORM STRATEGIC PLANNING IN PUBLIC HEALTH

Contact us:
Michele.Cecchini@OECD.org

Did you like the graphs? Find all the data to make your own at:
Oe.cd/publichealth

Stay tuned: the publication on tackling harmful alcohol consumption will be released soon

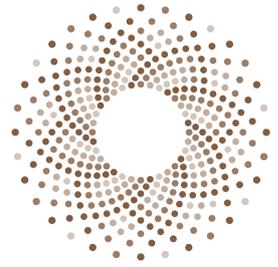
My presentation ends here, many thanks for your attention. Let me just add that much more is to come out soon as we have a new publication on tackling harmful alcohol consumption that is expected to be released very soon. Again, thank you very much.



Professor Kaarin Anstey

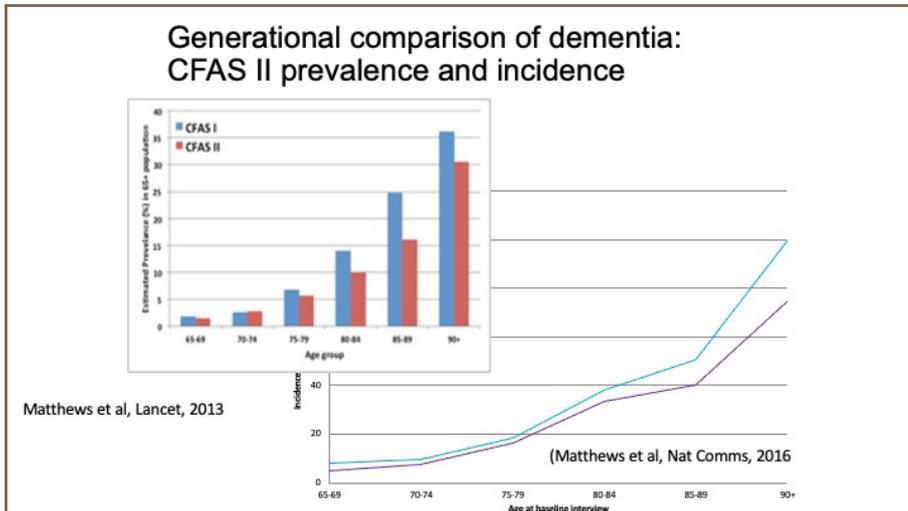
Professor of psychology and director, University of New South Wales
Ageing Futures Institute

Thank you I now would like to invite Carol to share her input.



Professor Carol Brayne

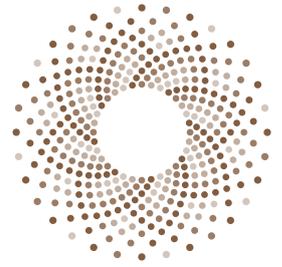
Professor of public health medicine and co-chair, Cambridge Public Health Interdisciplinary Centre, University of Cambridge



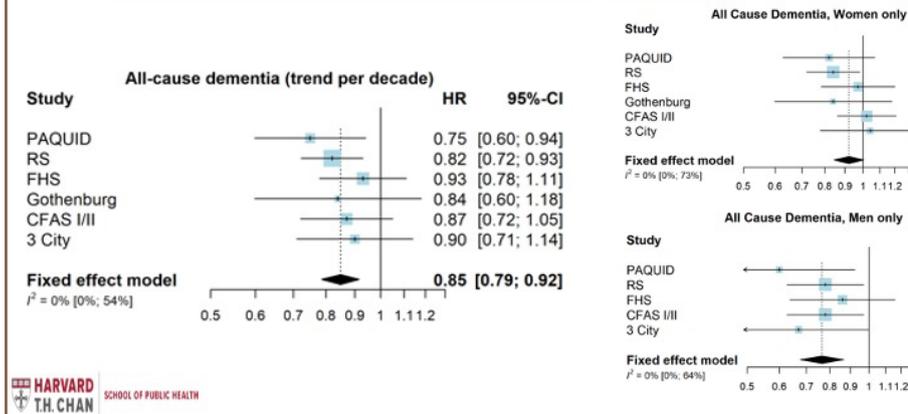
Thank you and thank you for inviting me. It is wonderful to have such an amazing group of people on one call. So, all credit to the World Dementia Council and Lenny and team. And thank you to Philippe and Kaarin for inviting me. I've just got a few slides what I want to say follows very well from Dr Cecchini's presentation which was very public healthy. In a way Kaarin it is a segue from his into mine rather than very different perspectives.

So public health is the organized effort of society to improve health and wellbeing in populations and as such it looks at the entire health of populations and dementia is one part of it. And one part of it which evolves during the life course and is manifest for most people in late life as all of you know for so well because you have been deeply immersed in it for most of your careers.

I wanted to show that our assumptions about dementia should be subject to careful thinking across time. You will all be familiar I know with the fact that in England and Wales the study we designed to look at difference across generations funded by the MRC in the Cognitive Function and Ageing Study did demonstrate a reduction in age-specific prevalence and incidence. This was not the only study to show this. But there are only a few studies around the world that maintain the methods that allow us to examine such changes across time. And it is really important to bear this in mind because there is the organism of ourselves as humans, then there is the clinical manifestation of dementia, and then there is the way society perceives it. And I would argue we need to keep in mind always that we need to constantly check our concept of disease and disorders and how they manifest in society now and in the past and also across different cultures.

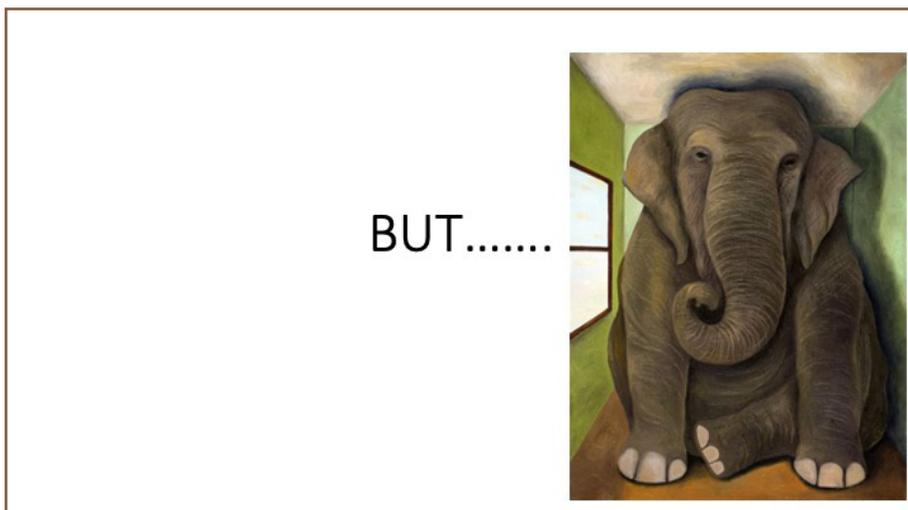


Per decade trend - All-cause dementia

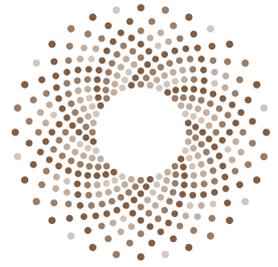


This reduction in dementia is not isolated to England and Wales. You will all also be familiar with this output from the collective of the cohorts that were able to look at cross-generational changes. There has been some further evidence since this, the HRS has published as well. And what we see is the collective evidence suggests we are seeing a downward trend per decade up to the present. We are very anchored in the data we are collecting across time. If we don't collect population based data, basic descriptive epidemiology, we are reliant on record base data which is subject to change in fashion of diagnosis and clinical practice and we will not know whether these trends continue into the future.

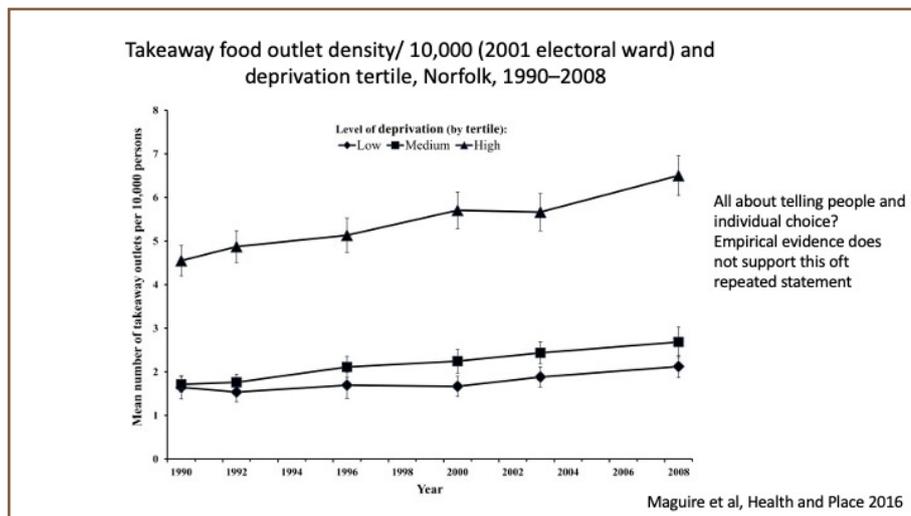
Now this table is good news. This is also seen in conditions such as stroke and heart disease. Which is one of the reasons in the cohort study that we thought we would see change across time even though vascular dementia, or vascular contributions to dementia, were relatively underplayed for quite a lot of decades.



The elephant in the room is what we have synthesised from the Lancet Commission, global evidence reviews, and other multiple reviews from around the world, and more understanding the internal changes within those cohort studies and this is about understanding what drives those changes. There is an assumption that many conditions



have changed for good across time in higher income countries. But if you go onto the next slide...



If we exhort individuals to change their behaviours that we will be able to continue the improvements that we have seen over the past decades. But it is more complex because of inequalities. Those in more disadvantaged groups within our cohorts are not seeing the same benefit. As those of you who are familiar with Michael Marmont’s work about early life and influences on later life health will know, he has revisited a review he did ten years ago and has shown that inequalities are really very important. And these are inequalities and life course disadvantages that start from parenting, from poverty and inequalities within societies. And what is it that drives individual behaviour is much more than our individual choices. We have had an era where we have been thinking about choice being an important thing. But the evidence base really does suggest, and this is from public health and from neuroscience, that it is our environment that drives our behaviour. It is changes in the environment, it is the changes that make us take up physical activity or eat, as shown in this slide, or breath clean air. These things are at a macro level and that fits in with the timescale we have seen in the last presentation in that the changes we saw in 2010s in dementia prevalence are likely to have had their origins way back, decades and decades ago.

So, we do have the evidence to show policy makers we can change dementia prevalence in populations. We also have evidence about how we change things. From international, to national, to regional, to community, to household and to individual. Each of those parts plays a part in dementia risk reduction but the biggest levers are likely to be things that effect our health across the life course. And the approach of focusing on the individual is only a tiny part of that whole profile.

So, I am hoping that the research programmes the World Dementia Council promotes will work on the basis of all of those levels. Generating evidence on how to change things on all of those levels.

Chat function

The chat function was available throughout the dialogue for participants to ask questions of presenters and to hold discussion amongst each other. It began just under 15 minutes into the event and is displayed below. It does not necessarily correspond with the adjacent transcript in this document.



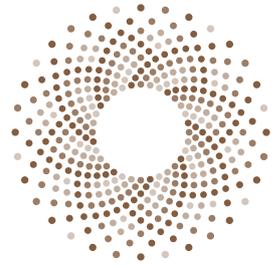
Dr Charles Alessi

Would like to speak please.

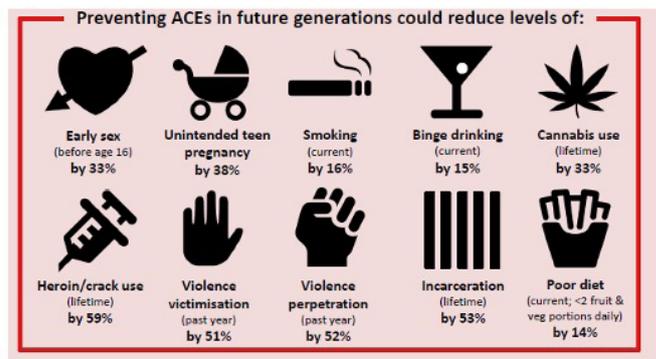


Dr Heather Snyder

Question to the speakers: How - if any - do you anticipate the current global pandemic add to the considerations on the impact of prevention intervention?



Importance of lifecourse influences on later life (brain) health and wellbeing



Bellis et al., 2014

My last two slides really emphasise the life course angle. Which is if we have societies where very poor behaviours are being promoted in our unequal societies, we are going to be building up a problem for the future. I would add to this one, bottom right, that if we think about low- and middle-income countries then we think about malnutrition, stunting and poor brain growth and poor stimulation in early life that will contribute as well.



Finally, we must always bear in mind, and it is vital, that we should be asking how does our work contribute towards the sustainable development goals and meeting those goals.



Neerja Chowdhary

I would like to speak too, please. Thanks.



Dr Gaël Chételat

Thanks a lot for your presentation! Could you please elaborate a little bit about what you think is the specific impact of social interactions: what are the possible mechanisms through which social interactions might modulate AD risk, are there known inequalities across countries of the degree of social interactions in old ages that would be related to differences in AD prevalence etc?



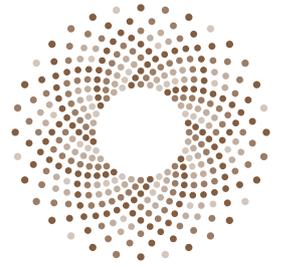
Dr Heather Snyder

Thanks you Carol!



Dr Amit Dias

Thanks for the presentations. The LMIC generally get left out and in fact would benefit much more from prevention strategies. The



Professor Kaarin Anstey

Professor of psychology and director, University of New South Wales Ageing Futures Institute

Ok thank you Carol, I now would like to hand over to Yoshiki.



Dr Yoshiki Niimi

Special appointed lecturer, Unit for Early and Exploratory Clinical Development, University of Tokyo

Lancet paper made a big impact but came during the COVID Pandemic.



Maree McCabe

Thank you to our speakers I have a question.



Dr Amit Dias

We need to get the interventions delivered through Primary Health Care. it will be cost effective and will also address all NCDs.



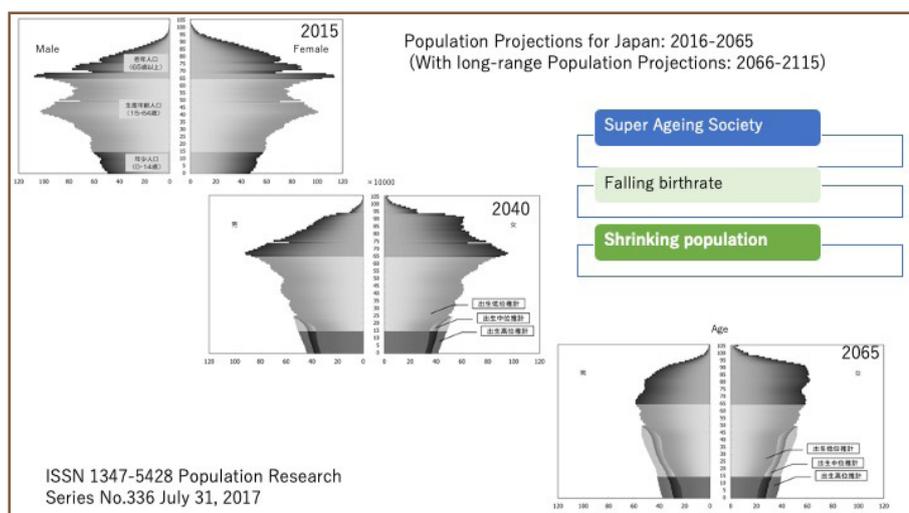
Dr Susan Mitchell

Despite progress in the recent years, most members of the general public and many health care professionals & policy makers simply don't know about the potential for dementia risk reduction. Can we make progress if awareness still remains very low? And what else can we do to increase awareness?

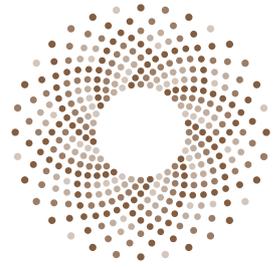
Japanese National dementia strategy and dementia prevention

Yoshiki Niimi
The Unit for early and exploratory clinical development,
Tokyo University Hospital

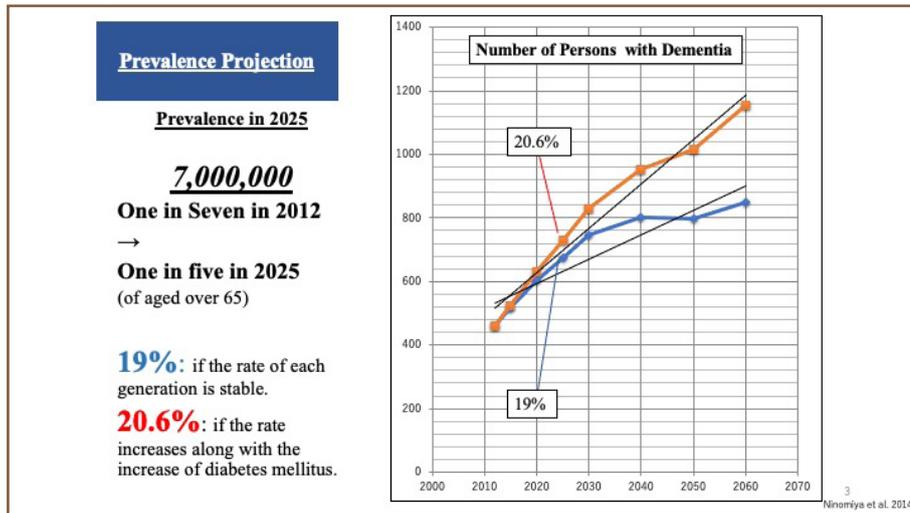
Good morning, good evening everyone. I am delighted to make a presentation at this important workshop. In this presentation I hope to share about Japan's national dementia strategy and how it focuses on prevention.



Until now Japan has been ageing faster than the rest of the world. Now it is in a super ageing society. The proportion of the population 65 years old and over was 26% in 2015. This means 1 in 4 of the Japanese population is an older person. That will increase to

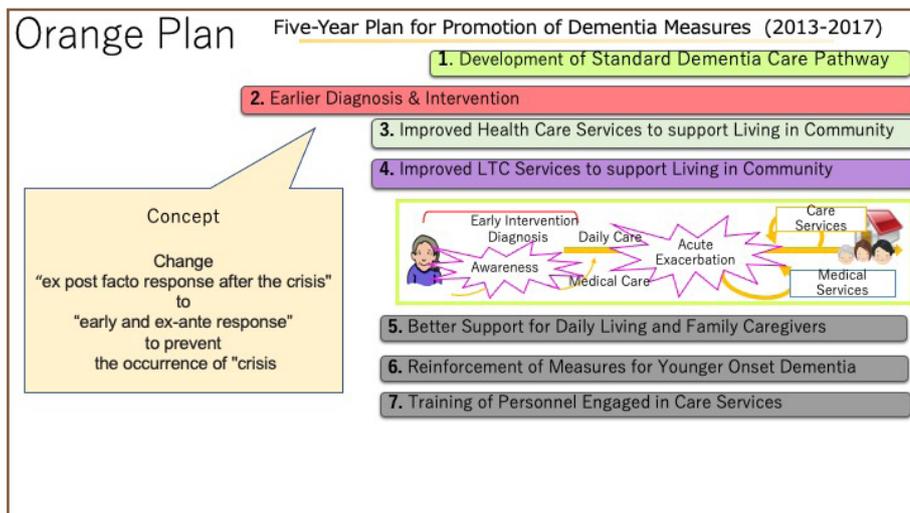


35%, or one third of the population in 2040. Population pyramid indicates a change in shape from its current two peaks, as show in the top left of the slide, to an upside-down triangle as indicated in the bottom right.



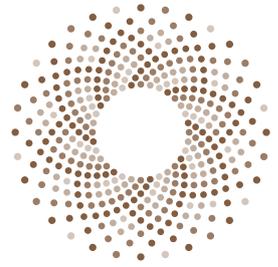
Dr Ryoji Noritake
In Japan, as Dr. Niimi indicated “prevention” became unfortunately sensitive wording as it was regarded “labelling dementia something to be preventable.” One of the causes it became issue is obviously we do not have bio marker. As Charles implied, if we include more digital technologies for diagnosis scientifically, prevention can be more acceptable term.

So, we have recently estimated that there is approximately 15% of elderly population with dementia in Japan. A recent study showed the prevalence of people with MCI at 13% of the elderly. So, one in seven living with dementia in Japan. Official projections show it will be one in five by 2025. And this study also showed the prevalence of diabetes will influence dementia prevalence in the future. Japan introduced the first dementia plan in 2013 and revised it in 2015 and again in 2019 to reflect the new insight on dementia prevention.



Matthew Baumgart
Question for Karin: with limited dollars available to public health agencies, how would you recommend we convince/guide those agencies to work on dementia risk reduction?

So, this is the first national plan established in 2013. It aspired to deliver improvement in health care services and long-term care centres to support people with dementia in order to build a society where people with dementia can continue to live in the local environment for as long as possible. One of the seven pillars is earlier diagnosis and intervention. This is built on the concept that it is necessary to change the ex post facto response after the crisis to the early and ante response to prevent the occurrence of crisis point related to the development of dementia symptoms. In other words, secondary and tertiary prevention.



Professor Gill Livingston

This paper we did with Martin Knapp looks at cost saving and cost effectiveness of some policies and it may help to see the money saved and cost effectiveness of some individual policies.



Lydia Lanman

Would love to hear the panelists' perspectives on the role of screening, early detection and diagnosis, through advanced detection and diagnostic tools (including digital) in support risk reduction and prevention.



Professor Bloss Stephan

Just a comment - a key competent of prevention is education/ knowledge sharing. We need to determine how best to increase knowledge of the potential for risk

New Orange Plan Comprehensive Strategy to Accelerate Dementia Measures (2015-2025)

Basic Concept

Realize a society where persons with dementia can live with dignity in a pleasant and familiar environment as how they hope to be as long as possible.

- Formulated by MHLW in collaboration with Cabinet Secretariat, Cabinet Office, NPA, FSA, CAA, MIC, MOJ, MEXT, MAFF, METI, and MLIT
- Prioritizing the standpoint of persons with dementia and their families

Seven Pillars

- Raising awareness and promoting understanding of dementia
- Providing health care and long-term care services in a timely and appropriate manner as the stages of dementia progress
- Strengthening the measures for early onset dementia
- Supporting those looking after people with dementia
- Creating age and dementia-friendly community
- Promoting research and development and disseminating the results, of **prevention**, diagnosis, cure, rehabilitation model, and care model for dementia
- Prioritizing the standpoint of persons with dementia and their families

“~ It is though that age, heredity, blood pressure, diabetes mellitus, smoking, trauma, weak hearing, etc. are risk factors and physical exercise, good meal, leisure activity, social participation, cognitive training, mental activity, etc. are protective factors for dementia. As for a dementia prevention, depends on the fact that daily activities such as exercise, oral health, improvement of nutrient state, social activity, hobby would protect the cognitive decline, we promote measures tailored to each region such as a salon, a gymnastic classroom by community residents.”

After the G8 dementia summit in UK in 2013 and the global dementia legacy event in Japan in 2014 a new Orange Pan was launched in 2015. In the seven pillars prevention is mentioned in the sixth pillar: promoting research and development and disseminating the results of prevention, diagnosis, cure, rehabilitation model, and the care model for dementia. In the plan prevention is mentioned this way: dementia prevention depends on the fact that daily activities such as exercise, oral health, improvement of nutrient state, social activity, hobby would protect the cognitive decline, we promote measures tailored to each region such as a salon, a gymnastic classroom by community residents”.

National Framework for Promotion of Dementia Policies (2019-2025)

Basic Concept

- Aim for a society where people with dementia can delay the onset of dementia and live their daily lives with hope.
- Promote measures with "coexistence" and "prevention" emphasizing the perspectives of people with dementia and their families

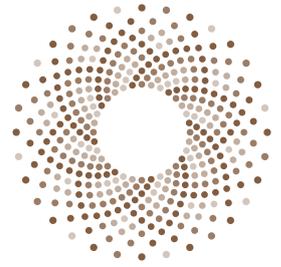
Five Pillars

- Raising awareness, Support the voice of PWD
- Prevention**
- Medical care, Long-term care, Carer support
- Dementia barrier-free, Support for YOD, Social participation
- Research and development, Industrialization, Internationalization

Measures

So, in 2019 Japan renews the Orange Plan with a National Framework for Promotion of Dementia Policies. It aims for a society where people with dementia can delay the onset of dementia and live their daily lives with hope. In order to deliver this, weight is attached to the concepts of “coexistence” and “prevention”. The term prevention is in the second pillar of the new national plan.

The plan compartmentalizes prevention to each stage of the dementia journey. On the far left you see the first primary prevention for a person with no cognitive decline or in a pre-clinical stage to delay onset. Then secondary prevention for person with cognitive decline or MCI to practice an early diagnosis and an early response in order to delay



progression. And third, dementia barrier-free society for a person with dementia. To bring an inclusive society. It means coexistence with dementia and an inclusive society for the person with dementia.

- 1) Promotion of activities that may contribute to the prevention of dementia
 - lifestyle related disease; diabetes, hypertension →Provide places where elderly people can communicate in local area
 - Social isolation →Utilize a Long-term care insurance service
→Health consultation support in local area
- 2) Promotion of collecting evidence on prevention
 - Collect and disseminate good practices; Initial-Phase Intensive Support Team, Integrated community care support center, Medical Center for Dementia
 - Utilize data; Long-term care insurance data base, new database for real world data; **[CHASE]** (Care, Health Status & Events)
- 3) Evaluation / certification of private products and services

reduction that is context specific (e.g. high-income vs. LMIC) and targets those who would benefit most to reduce inequalities.



Dr Sebastian Köhler

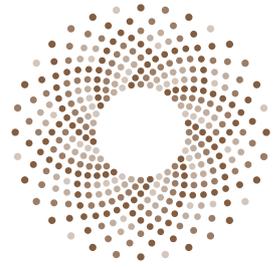
Are we talking primary dementia risk reduction or maintaining brain health/cognition with secondary(?) effects on dementia risk. I notice that many researchers are sceptic about dementia risk reduction but have no problem talking about brain health, eg they acknowledge the contribution of risk factors to cerebrovascular health. On the other hand, policy makers are more keen about dementia risk reduction. I feel it's not only about semantics. What are your perspective on this?

There are three main measures. First, the promotion of activities that may contribute to the prevention of dementia for example, the reduction of diabetes, hypertension and social isolation. But also measures to provide places where elderly people can communicate in local areas, fully utilize long-term care insurance service and provide health consultation support in local areas. Secondly, the collection of evidence on prevention from many programmes such as integrated community care support centre or medical centre for dementia. And data should be disseminated as examples of good practice. In addition to the current data sets the plan established CHASE last May. It aims to collect and analyse real world data to provide scientific evidence on real world evidence-based dementia care. And thirdly to evaluate and certificate private products that enable a dementia barrier-free society.

“They say prevention is important, but the cause of dementia is still unknown. If focusing on prevention, people who developed dementia may become a failure. They will lose their confidence even if they do their best. Rather, preparation is essential. As same as an earthquake, it is impossible to prevent it, but we can prepare for it. By preparing, we can say okay if you have dementia.”

Voice from Japan Dementia Working Group. Mar 12nd 2019

At the end of my presentation, I want to share the voice of the person with dementia “they say prevention is important, but the cause of dementia is still unknown. If focussing on prevention, people with developed dementia may become a failure. They



will lose their confidence even if they do their best. Rather, preparation is essential. As same as an earthquake, it is impossible to prevent it, but we can be prepared for it. By preparing, we can say okay if you have dementia.”



Professor Kaarin Anstey

Professor of psychology and director, University of New South Wales Ageing Futures Institute

I will now hand over to Philippe.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you very much Yoshiki. Now I would like first to say it is a real great pleasure to have you all online at these difficult world times. And I would like to thank our presenters for their holistic view of what prevention could be in the field of cognitive impairment and Alzheimer’s Disease.

As you know, for almost 10 years the possible prevention of Alzheimer’s Disease has been increasingly documented. Of course, we would have preferred more evidence-based prevention studies but the complexity, the duration, the number of individuals to be recruited, are strong limitations to the large deployment of those studies. Despite this, we have a lot of presumption of causation coming from epidemiological long-term prospective studies, from small-scale intervention trials and from a lot of meta-analyses. This has begun to convince more and more researchers and physicians that alongside, or together with, a symptomatic and curative treatment, yet to be discovered, prevention could be a major player in the fight against Alzheimer’s disease. And for now, prevention is more easily and readily actionable. So, this is not so different from other chronic diseases such as cardiovascular disease, diabetes, and cancer. While for all these diseases active treatments do exist but their societal impact is far better when there is prevention, primarily lifestyle changes.

So, similar to some of the chronic diseases, preventing Alzheimer’s is more about “procrastination” rather than primary prevention. The long-term processes which drives dementia is already engaged when prevention starts, so slowing down the process is related more to secondary prevention. So, the main goal of prevention strategy is, for the time being, mainly focussed on postponing the age of onset of the disease for as long as possible, even to the point where it has not occurred at death.

I would like to stress a point that I have heard from Michele’s talk who identified five questions policy makers need to answer to trigger actions. Because the World Dementia Council’s role is also to lobby to make actions go faster in the different countries. So, let’s see if we can already provide some answers.



Professor Nicola Lautenschlager

Do we have to expect that the pandemic might change the trajectory of dementia incidence and prevalence due to increased risk like isolation and more mental health issues?



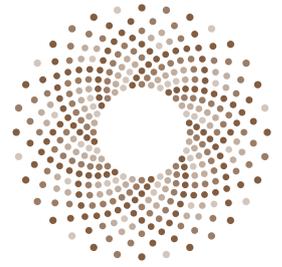
Dr Cecilia Samieri

Do you think a one-size-fits-all preventive approach is likely to succeed? Shouldn’t we move toward a more precision prevention thinking? It is likely that the preventive strategy would differ not only according to genetic background, but also to more social-related factors.



Mitchell McMaster

I think primary prevention for middle aged people has the most potential benefit, but middle aged people don’t



The first question was does prevention intervention improve health. Yes indeed. This will improve health because the modifiable risk factors for AD, prevent diabetes, cancer, cardiovascular disease, so the life expectancy without disabilities could significantly increase. So, for example, when I was discussing with Vladimir Hachinski about the possible Canadian prevention plan, he said that such interventions may at least significantly reduce stroke in women which would be a great achievement.

Secondly, does it reduce health expenditure. This is the one-million-dollar question that is debated between epidemiologists and economists. The older you live the more expensive the health expenditure is. But obviously this doesn't take into account the social care cost reduction, the benefits for quality of life for living with fewer disabilities brings about. The only strong arguments that we can raise against health economists who would like us to die before we get any disease is the theory of the compression of morbidity. This was put forward by James Fries at the end of the last century and argued that the burden of lifetime illness may be compressed into a shorter time period before death if the age of onset of the first chronic infirmity can be postponed. And this is what we would clearly expect from an illness that destroyed our cognitive function and social relationship. So, to the second question from Michele, I would also answer yes, especially as we know as physicians the increased health expenditure that is incurred by the family and carers because of the daily burden, and that could be avoided.

Third question, does it improve health inequalities. That is also an excellent question. This is one of the general challenges of prevention strategies. The beneficiaries of prevention campaign are very often the ones who need it least. They are highly educated, know a great deal about healthy lifestyles, have modified their diet, don't smoke, take exercise and are always keen to try new prevention suggestions published on the internet or in magazines. So, prevention measures need to target particular populations with higher risk but would receive greater benefit. There we would need a specific implementation plan.

The fourth question: is this a cost-effective intervention. Yes, we can imagine because of the benefit of these measures. But until an implementation plan has been decided following all the recommendations it would be very difficult to assess the cost effectiveness of such measures. However, taking into account all the cases avoided one can think that the long-term costs will be proportionally reduced and the projected 2-3 thousand billion euros of expenditure in 2050 will be significantly decreased.

Last question: when will the effect show up. Michele showed that this takes time, but we need to have some ideas of how long this would take. Then we can go to a publication by Ron Brookmeyer in 1998. He assumed that the number of US inhabitants affected by AD in 1997 was around 2.32 million. An intervention that could delay the mean onset of AD by approximately five years, which corresponds to a 50% risk reduction, would reduce the expected prevalence by 1.15 million after 10 years (2007) and four million after fifty years in the US, instead of the 30 million expected. Clearly then we will need time to observe the impact of such measures and we need to convince policy makers and decision makers that they will not get the results before the next election.

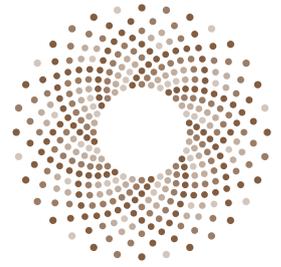
So, thank you very much for the presentations and as Lenny said at the beginning this meeting is designed to get your input as international experts on where we have come

see dementia as a problem that they need to be worried about now, to them it seems to be very much a future problem. I wonder whether we might get more traction with the public and also with governments by focusing on non-communicable diseases more broadly: heart disease, diabetes, cancer etc and partner with NGOs in these areas to lobby the government to implement education and multidomain lifestyle improvement campaigns?



**Professor
Martin
Prince**

Two challenges for me 1. the modifiable RF are almost all already priority targets for prevention of cardiometabolic disease and/ or cancer and 2. early lifecourse



from, where we are, where we need to get to and how we get there. The questions where we have come from, and where we are, have been partly covered by the previous talks. In the following minutes we can complete these questions by focussing on the two most challenging questions: where we need to get to and how we get there. It would be great to hear your perspective on these two points to help identify at the end of this workshop globally actionable strategy to help convince more countries to engage in the development of long-term prevention plans to tackle the dementia challenge.

We have about forty minutes now to hear from all of you for discussion and reflection. We will keep an eye on the video screen for people indicating their desire to speak. Can I remind you we also have a chat function open where you can also share your perspective and indicate you would like to speak live in the meeting? Thank you very much for your attention and would like to speak first?

modification is key, but the old will be more receptive than the young to messages around dementia risk - so how do we leverage the new knowledge on scope for dementia risk reduction to best effect?



Professor Carol Brayne

Professor of public health medicine and co-chair, Cambridge Public Health Interdisciplinary Centre, University of Cambridge

Can I just say, thinking about all the presentations, and yours and Karrin's contributions, thinking about compression of morbidity, there is incredible evidence for it just in the issue you raised, about those who are most able to, can already do things to compress their morbidity. We already have that evidence base, very strongly, in our inequalities. Everything about inequality creates unhealthy life expectancies. So, I think we can start with that. If we were able to reduce inequalities, we would be able to bring the populations who were not, as it were, having optimal brain health and brain aging throughout their life course, begin to bring their experience of their life course up to the most advantaged. Then we would de facto compress morbidity because we can see that happen in the most advantaged already.



Dr Heather Snyder

Sebastian - great point. Prevention - maybe primary or secondary - would have similar impacts in terms of improvement of health/ QoL and reduced resource utilization.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you Carol. Anyone other comment or question?



Dr Kay Deckers

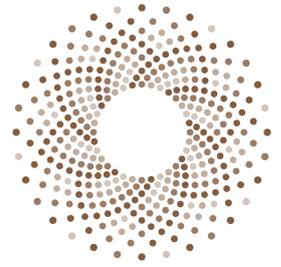
Thanks for the wonderful presentations. I personally think that creating awareness on the lifestyle-brain health relationship is a first crucial step. In our awareness surveys, we noticed that the majority of the participants (in both the



Dr Charles Alessi

Chief Clinical Officer, Healthcare Information and Management Systems Society (HIMSS)

Thank you and thank you very much for those presentations. In many respects we have seen the last few years have been particularly hopeful. As Philippe has said the case has been made for risk reduction. The case has been made for all of the things we have been talking about over the last few years. But I suggest we are at a crossroad at the moment. And I suggest that the World Dementia Council really could be missing a real opportunity. Why do I say that? Covid-19 has caused an incredible amount of confusion and chaos in health and care systems. We all understand that. But sometimes you get an



unexpected benefit. And the unexpected benefit is there is a shaming now, globally, in the way we have managed non-communicable diseases. And that is abundantly clear if you look at the excess deaths associated with the fact that health and social care systems have been focussing purely on the communicable diseases like covid-19 itself.

What this has meant in essence is that suddenly digital transformation has become mainstream. Because it has been appreciated that the only way we can manage the population who have non-communicable diseases like dementia is to really start to deploy processes that manage their health and care that using digital interventions. This gives us an enormous opportunity for us to look at the potential for us actually hitching our thoughts and approaches towards a more digital approach. Clearly this is an opportunity, but I would suggest that we haven't defined it well. What we have heard to date is the fact we have to be really quite careful it doesn't increase inequalities – because we are all well aware of the digital divide of course. But I would suggest if we are sensible and smart, we can design processes that targets those people with inequalities, specifically using digital technologies to do it. Some people have tried that and actually the results are really quite good. The thought of us using systems that retailers use to attract particular segments of the population can be used in the same way to attract the right segments of the population to manage their population better. I don't think we have done enough of it and my call to the World Dementia Council is this is the opportunity to do it. It is better than lobbying it is called showing the way and I really think we need to do it.

general population and health care professionals) is unaware of the potential of dementia risk reduction. More than 70% would like to receive more information on this topic, preferably via their GP. Should we not join forces with other prevention programs with shared risk factors (diabetes, cardiovascular disease)?



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you Charles. May I ask a question about that Charles? How do you implement what you are saying, I think it is a great idea, but is this a nationwide initiative, or an international one that should be supported by WHO? Because it is larger than dementia.



Professor Martin Prince

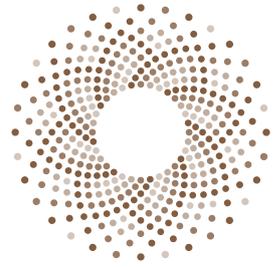
I suspect that the answer may be by targeting gov't's, and pushing for more direct action through fiscal measures and legislation, e.g. diet, food and alcohol industry, advertising, pricing etc. Gov't's are receptive to news about potential for reducing dementia risk.



Dr Charles Alessi

Chief Clinical Officer, Healthcare Information and Management Systems Society (HIMSS)

It is much larger than dementia. I think the world is moving to us thinking about managing non-communicable diseases not by body parts but all together which is what you described. I think there are two components to this. Yes, it is partly national or system wide depending on what jurisdiction you are talking about. In countries where there are national health systems it would be a national system you would be using. But I think there also needs to be an international dimension to this and it is not out of the realms of the possible to think about ways to manage it. Perhaps thinking about nudge techniques to assist people with their behavioural change or gamification and this has been used quite successfully in some countries. It all depends on the skill of the people designing the processes. At the moment it is designed for people who tend to be white, about as old as me and about as rich as me. They also need to be designed for a different type of individual.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

I have two questions on the chat. The first is from Heather Snyder. Hello Heather. Do you anticipate the current global pandemic will add to the impact of prevention interventions? Yes Carol.



Professor Carol Brayne

Professor of public health medicine and co-chair, Cambridge Public Health Interdisciplinary Centre, University of Cambridge

Yes! Thanks. I don't want to hog in anyway but thank you. I think it does but is of a kind of exquisite moment. If we don't seize the moment as we learn to cope with covid-19, because it is a coronavirus it will mutate it will continue to cause problems almost certainly. If we don't countries will go back to earlier patterns, they won't hear the message anymore. There is a moment. The World Dementia Council has got the ear of policy makers. It has flushed out all the inequalities and all the problems that Charles has highlighted. I would suggest that on close observation because I have many colleagues who are working on the front line in covid-19 pandemic, with great respect to Charles's view of the solutions, the problems are absolutely endemic in society.

Low- and middle-income countries, I mentioned malnutrition earlier, and the challenges to social structures in other counties coping with covid-19. In our country the big outbreaks have been in places where there will also be a risk of poor brain health in later life: poor housing; poor working conditions; short term employment; transient populations. These are things we must tackle, we must produce a good evidence base to show why it is a good thing in all ways, so that the policy makers can see that is the easier and better route to take with all the justification from those five questions.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you Carol. Neerja would like to speak next.



Neerja Chowdhary

Technical Officer, Department of Mental Health and Substance Use, World Health Organization

Thank you Philippe. Hi good morning, afternoon, evening everyone. Thanks Lenny, Kaarin and Philippe this is a very interesting meeting that you have brought together. From the point of view of the WHO Brain Health Unit I wanted to say a few things about where we are and where we are going. This is a good time to take stock given that we are



Dr Heather Snyder

Cecilia and Gill - WW FINGERS is set up to evaluate - with some aspects harmonized to allow the cross study assessment - multimodal interventions for risk reduction with the framing of overarching principles but taking into account the societal/ more local personalized aspects of the intervention. For that reason of one size likely does not fit all...



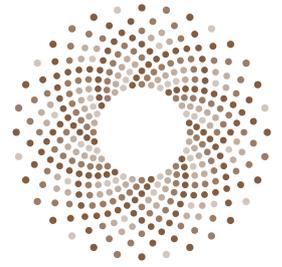
Professor Sandrine Andrieu

We have a to face a methodological challenge: think globally (environnemental factors) and at the same time taking into account individuals factors to avoid inequalities.



Dr Susan Mitchell

In response to Sebastian Kohler we (Alzheimer's



mid-way through the Global Action Plan which extends up to 2025. And in fact, as you know action area three speaks to dementia risk reduction. We are preparing to release the global status report on how we have progressed on realising the targets in the action plan. We are using the information from the Global Dementia Observatory that countries have reported on.

And just to give us a little snapshot of where countries are in terms of their risk reduction, let me pull up a few numbers for you that we have in the Global Dementia Observatory. So, sixty countries have provided data for the GDO of which 43 countries have a dementia policy, either stand alone or integrated into another policy. Of these 43 nearly all (41) report having dementia risk reduction incorporated into their plans. The important thing to note though is most of these are high or upper-middle income countries. So, we still don't have too much data from low- and middle-income countries and low- and middle-income countries are not doing as well as we would expect.

What the Observatory shows is that we are lagging behind in terms of risk reduction. There are the two actions that we need to do in terms of moving forward. One is focussing on integrating dementia risk reduction measures within NCDs, that is the most effective and resource saving approach. Including in terms of relevant sectors promoting physical activity, a healthy and balanced diet, managing weight and obesity in individuals, cessation of tobacco use, the harmful use of alcohol, as well as mental stimulating activities and social engagement.

The second activity to accelerate dementia risk reduction is to develop, deliver and promote evidence based culturally sensitive interventions along with training to help professional, especially in primary health care, in how to improve the care for people, how to address modifiable risk factors that they see. This brings me to the point that Charles made about digital interventions.

Something else we will be launching at the end of this month is the dementia prevention guide. Something that many of you on this call have in fact contributed to. It is about delivering text messaging to the general public about the various actions they can take and supporting those actions through digital means. This is the guide that helps countries that want to create such a programme about what they would need to have in place to do this, how they would be able to monitor and evaluated such programmes. We hope this guide can be rolled out and evaluated in some countries to take the field forward.

Another point I would like to touch on is the dementia research blueprint that we will be working on in WHO along with many of you and many researchers, academics and other stakeholders including civil society about how we can harmonise the research we are doing, including in risk reduction, so there are few redundancies and we can all learn from one another, including bilateral exchange between high and low and middle income countries.

Research UK) have just published a report considering the concept of Brain Health as a reframing of dementia risk reduction - we found the Brain Health was a more engaging concept and didn't suffer the same challenges around stigma and being something to only consider in later life.



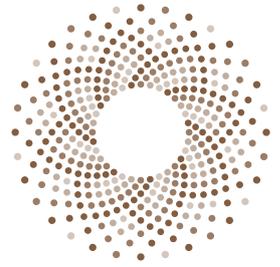
**Dr Amit
Dias**

Can you identify the best models for prevention of dementia, implemented in any country.



**Dr
Christopher
Chen**

I agree that it may be more inclusive to use the term brain health as a means of including stroke, cognitive impairment, mental diseases. It may also be more positive to emphasise health rather than just the absence of disease



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you very much Neeja. We have a lot of interventions so in order: Michele wants to make a comment.



Dr Michele Cecchini

Head of public health, OECD

It is a quick comment. I wanted to follow up with what Carol said about what we can expect from the pandemic and how it will affect policies on dementia. From my perspective. If you consider the part of dementia that can be prevented and the risk factors that underpin it. we see these factors getting worse. For example, as a result of the pandemic people are taking less physical activities, if we look at alcohol consumption in a few countries at least it is going, in the most recent UK data showed there had been a 5% increase in revenue collected by government meaning increasing sales of alcohol. Clearly it is not the case in other countries who have implemented strict rules on the sale of alcohol. So, in many of these risk factors there is a worsening which if they continue after the end of the pandemic will see a worsening in how successful we are in implementing measures to tackle dementia. At the same time, I see that if I look at my colleagues in health ministries working on NCDs they are thinking now more about covid-19. There is an important lever that this community, and other communities, keep NCDs high in the agenda of ministries of health because there is a risk, I think, that we lose a little bit of the momentum and the focus shifts to other very important global health threats.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Gaelle if you can open your microphone and ask your question.



Dr Gaël Chételat

Director of Research, Inserm

Thank you very much to the speakers. I would be interested to hear about social interactions and what the speakers think about the potential of social interventions on AD risk. What do you think about the possible mechanism whereby social interactions can alter risk and whether there are differences across countries in controlling how these social interactions that could be related to changes in age risks?



Dr Sebastian Köhler

Heather and Susan, thank you. I agree, we experience the same from our local brain health campaign. The concept of brain health seems to come over more smooth, less blaming the victim. Also seems to do more justice to current evidence such as FINGER.



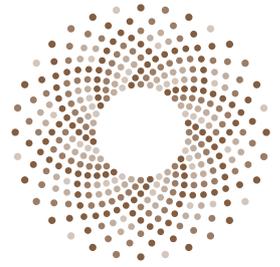
Jeremy Hughes

Susan is right to highlight the importance of public awareness. With 'Dementia Friends' awareness progs in over 40 countries it will be important to analyse their reach and impact including in addressing inequalities.



Dr Alex Bahar-Fuchs

I wonder if one of the most challenging areas for meaningful life-course intervention, but



Professor Kaarin Anstey

Professor of psychology and director, University of New South Wales Ageing Futures Institute

Maybe Gill will want to say something too. I don't think we can explain all the biology that would explain the benefits but there is even evidence from animal models that show that animals that like social interaction have brain atrophy and reduced life expectancy. We know that loneliness accounts for as much chronic disease as obesity. So, we know the impact of reduced social interactions is real, but I don't think we understand the biological mechanism. With covid-19 this is one of those other opportunities that we got now because we are all living in these strange socially isolated and it is probably compounding the social inequalities we have been hearing about. I will leave it to other experts to say how that is compounding our dementia risk but I would not be surprised if it is.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Gill Livingstone. You sent a link on the chat as well.



Professor Gill Livingston

Professor of Psychiatry of Older People, University College London

I had other things to say but I just wanted to try and answer the question. Like Kaarin said, we are not completely sure but there are several mechanisms about social interaction. People who spend more time with others tend to have a much healthier lifestyle, much more likely to eat better and move more, less likely to drink large amounts. So that seems to be part of it. Even accounting for that there seems to be a separate mechanism. Like Kaarin says it is cognitively stimulating talking to people. It is probably the easiest way of being cognitively stimulated and that is probably helpful. The other thing is people who are socially isolated are more likely to get low in mood. So, I think there are probably several interactions.

In terms of low- and middle-income countries as everyone said we need to know a lot more about it but in terms of the work we did a couple of years ago looking at India and a couple of other LMICs, we found social isolation had less impact there because people were generally not socially isolated, although of course some were. So, I think it is important, but it is not the main problem in low- and middle-income countries although for certain people, and in certain parts, there will be more social isolation.

I think it is interesting when we think of social isolation and deafness and things that is a different mechanism from other cardiovascular risk factors that go with stroke and heart disease. It is another way in.

potentially one of the most important yet neglected ones, is developing cognitively-oriented styles of engagement in daily activities that effectively builds cognitive reserve. I agree that developing awareness of these links by younger people is a major barrier but is key to our efforts.



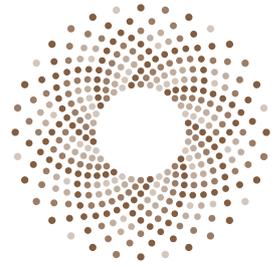
Professor Gill Livingston

I think Lindsay's research is really important and that people who are physically ill develop dementia with less neuropathology; so to work thinking about in older age physical health as well as healthy environment in younger age.



Lenny Shallcross

Martin makes good point about modifiable risk factors for cf/cancer. it is not quite easy for gov to focus on



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

There is a comment from Amit Dias, I will read it to save a bit of time, low- and middle-income countries generally get left out and in fact would benefit much more from prevention strategies. The Lancet Paper made a big impact but came during the covid-19 pandemic (as you know it was published this summer) and got less attention. Gill do you want to comment on that.



Professor Gill Livingston

Professor of Psychiatry of Older People, University College London

I didn't try to publish during a pandemic! Carol was also one of the authors. I was pleased there was any impact. I think things are different in low- and middle-income countries and even within any country different populations will have different modifiable risk factors and we are far more likely to be effective in populations which are deprived if we think what it is in their lifestyle and are able to say for you in particular this is what makes a difference for you. Rather than saying there is one size fits all that this is what's good for the United States, this is what is also what is good for India, China and Nigeria for example. It is extremely unlikely that it is all the same and we need much more granular work with some overall principles.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

We have about one question a minute so thank you for your interest. There is a question from Mary.



Maree McCabe

Chief Executive Officer, Dementia Australia

Thank you Philippe and thank you to our speakers that was excellent. I was just wondering in terms of health expenditure and the concern that governments have with the reduction of health expenditure if there was a reduction in health expenditure that was significant with improvement in heart disease and stroke and the improvement in the modifiable risk factors they share with dementia.

individual awareness at the expense of structural factors that are important to modifying behaviour over time.



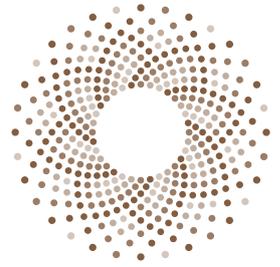
Professor Martin Prince

Regarding secondary prevention, do we know what the target BP should be for a hypertensive person with dementia, or target HbA1c for a diabetic with dementia? To optimise their cognitive trajectories.



Jacqueline Hoogendam

Referring to Jeremy's remark on dementia friends: as a part of tertiary prevention and increasing quality of life, in NL we want to engage dementia friends in activities with persons with dementia. In a neighborhood setting, one on one activities, like going fishing, running, cycling etc. Or as group



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you I think Gill you have posted a paper from Martin Knapp and others.



Professor Gill Livingston

Professor of Psychiatry of Older People, University College London

It was from Martin and us. Martin and his colleagues did the very complex economics around if you save money from reducing dementia than they live longer and does the money you save from people avoiding dementia get eaten up by them living longer. I think that was looking at individual interventions. I think as Carol has been emphasising individual interventions are very different from population interventions. What we found was in lowering heart disease and stroke and other things that also save money. Treating hypertension and hearing loss saved money as well as being cost effective. But preventing diabetes was not in terms of dementia by itself cost effective in terms of the criteria NICE uses. But what the research showed was that you now have a methodology that you can go through and say what this is likely to do in terms of costs, how many people is it likely to make a difference to. These are very important that government's want the answer to. I have put it in the link in the chat.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Among the different questions we have some that are related to awareness Susan Mitchell could you ask a question.



Dr Susan Mitchell

Head of Policy, Alzheimer's Research UK

Hi, it was a slightly broader point. There remains a gap between us as subject specialists knowing about this and public awareness, which remains really low. There are still many commissioners, especially in primary care who don't recognise the potential around risk reduction. And among policy makers the recognition remains low. So, we are all keen and recognise the need to develop this so how do we overcome that awareness gap and what do we do about it?

activities. In any way, having persons with dementia interact with the neighbourhood community, without stigma.



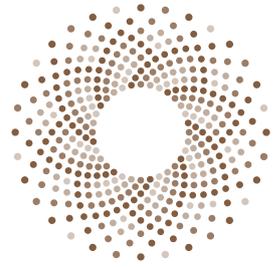
Professor Martin Prince

I fully support this Carol. That's where the message is most likely to gain traction - with gov't's - including those of low and middle income countries.



Dr Ruth Peters

I think the reframing towards brain health is an important point in terms of getting the message across. Whilst we spread the word we also need the infrastructure to support the follow on - we have just done a small project with GPs finding that they were aware of the risk factors but highlighted barriers to implementation. Also to Martins point - we need to understand what the target and



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

OK. I have a question from Ryoji that is interesting and relates to the last slide from Yoshiki.



Dr Ryoji Noritake

CEO and Board Member, Health and Global Policy Institute (HGPI)

Thank you very much. I wrote about it in the chat so you can read it. But basically, my comment is that since we do not have biomarkers for Alzheimer's and other forms of dementia the word prevention became quite sensitive in Japan. Patient advocacy groups felt that the concept of preventable was something that was attacking them. Dementia should be prevented. At the same time if we can use more digital technology for diagnosis it would be an opportunity to re-advocate the prevention of dementia.



Professor Carol Brayne

Professor of public health medicine and co-chair, Cambridge Public Health Interdisciplinary Centre, University of Cambridge

Can I just pick that up because I think Yoshiki's comment about not blaming individuals for getting dementia is incredibly important? I think that comment from the patient group is incredibly important and I think the World Dementia Council needs to take it up because the emphasis on awareness, individual awareness, clinical awareness or politician awareness, if we do it (messaging) in the wrong way it could result in individual blame and that has many consequences depending on what type of social network and social security system there are. So, the deserving poor and undeserving poor is one of those Victorian phrases that has come to the fore during these times and we really want to avoid that.

And just on Maree's question, I think there is cost shifting. So, we now have heart failure which is also likely to be associated with cognitive impairment if not dementia. So, I think there is a really important thing about dementia in its context, of all the disorders, at different life phases as it were, so it is risk and then its manifestation in its context of multiple morbidity.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Related to these two points I have a question from Lydia. I think your point is really interesting in the discussion, can you make your point, because it is related to stigmatisation also.

ideal values are for risk reduction - especially for factors like BP where there is evidence for treatment having an impact on dementia risk.



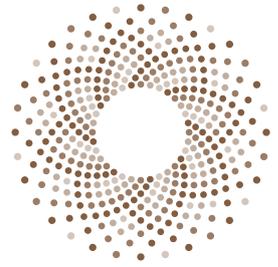
Dr Natalie Marchant

So does it follow that we should really be focusing on people who are most at risk, in more deprived communities and lower income countries? Because from Carol's slide they did not seem to have reduced risk. And then we should involve people from those communities in developing strategies.



Dr Heather Snyder

Martin - SPRINT MIND is one of the larger studies in a diverse population looking at intervention for blood pressure - with aggressive treatment for SBP toward 120. They are continuing to follow these participants now



Lydia Lanman

Senior Global Access Policy Leader, Hoffmann-La Roche

Hi, I think part of it is related to what Ryoji said around can we use diagnostics whether they be digital diagnostic tools or advanced diagnostics to help predict who may be most at risk of developing later stages of dementia because I wanted the thoughts of panellists or other attendees to weight in on this in terms of what is the role of screening, detection, and diagnosis in terms of broadening our ability to undertake risk modification.

to understand the sustained SBP and needs.



Dr Amit Dias

Agree with Gill.



Jacqueline Hoogendam

We focus on prevention by lifestyle. In NL we also want to encourage research on other forms of prevention, e.g. pharmaceutical. Any views on the prospects of this?



Dr Christopher Chen

I believe that craig Ritchie and colleagues have proposed a brain health program for Scotland which could be a model.



Dr Amit Dias

Comment by Gill... we do have a 'Mind It' programme in schools for promoting brain health and encouraging elder care and



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

That is a very important question. Carol I see you smiling want to make a comment?



Professor Carol Brayne

Professor of public health medicine and co-chair, Cambridge Public Health Interdisciplinary Centre, University of Cambridge

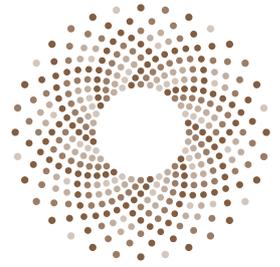
Well, we need to bring the evidence that we have to bear on what differences we can make to natural history on the presence of such screening. We need really good trials whether it be biological markers or combined morbidities which we already understand and better management. These are of course what is happening in some of the trials going on at the present. I think it is important to model the potential impact. When we did that a few years ago with the CFAS data and other external data on the modifiable factors and looked at primary, secondary and tertiary prevention, as Yoshiki defined them, what we found was the primary and tertiary prevention had the biggest societal impact and secondary prevention which is that early detection had a minimal impact. So, you need to have an evidence base for that. I know that the work has been updated with Gill's work, but you need to be able to draw in the true costs of services, medication, longer life and so on.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you Carol. Just a reminder you can go on the chat where this is a lot of interesting discussion. I will jump to one of the questions from Nicola do we have to expect that the pandemic might change the trajectory of dementia prevalence and incidence due to increased risks like isolation and more mental health issues. That is related to Heather Snyder's question as well.



Nicola Lautenschlager

Professor of Psychiatry of Old Age and Director of the Academic Unit for Psychiatry of Old Age, University of Melbourne

I think it is an unanswerable question so it is a bit unfair because we have no idea how this pandemic will go and what phases it will go through and how it will linger in different countries. It is quite interesting because there are also positive things that will come out of the pandemic such as supporting each other and resilience and friendships and so on. Which could also be protective. Then there is change of behaviour some are more physically active, and some are less so. I think it is impossible to answer this point but it is an interesting question what impact will that global phase of the pandemic have on NCDs and their incidence and prevalence.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

There is an incredibly interesting discussion on primary and secondary prevention that you can see in the chat. I have a question from Cecilia if you want to raise your point.



Dr Cecilia Samieri

Permanent Researcher, INSERM (French National Institute for Health)

Hello everyone. I just wanted to raise the point about being more precise about prevention. Gill, I think you already made the point. We are trying to figure out how to move to precision prevention. That is something we are thinking a lot about in our group on nutrition and metabolic disorders from our PIA at the Alzheimer's Association. There is evidence that one size fits all may not be the most effective approach to prevention, at least when you focus on nutrition. And maybe there would be specific strategies in terms of prevention not just based on your genetic background but also socioeconomic background and social factors. At least in my view it is likely it would be wrong to focus on the same preventive approach in deprived populations versus highly educated populations. And it is really like that some different approaches are going to be effective dependent on all these different factors. So, I think there is a lot to do in terms of research to really understand all these modulating factors and epidemiological studies and observational data should be really leveraged to stimulate all the different scenarios to see what could be effective for novel prevention strategies.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Carol than Gill.

it is working well. Lifestyle interventions should start from schools in my opinion.



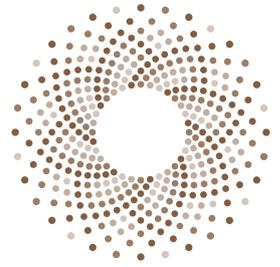
Dr Sebastian Köhler

In our campaign, we found a higher increase in awareness of modifiability of dementia risk in the low educated. There is much for improvement. A focus on the most vulnerable (low education, illiterate) is very important but also very difficult and needs to include all societal and policy stakeholders as individual resources and capacities are often limited.



Professor Emiliano Albenese

Proportional universalism may be relevant to inform who we target in society, and what we prioritize. However, the WDC should advocate that the rhetoric of



Professor Carol Brayne

Professor of public health medicine and co-chair, Cambridge Public Health Interdisciplinary Centre, University of Cambridge

There is a lot of emphasis in the chat and in the questions on things that are very individually orientated, and I would just bring us back that we have evidence across generations that without such measures we have reduced dementia prevalence and incidence. So, it is things that happen at a macro level that influences the huge changes, as Michele emphasized, we really need to pay attention to that and get the balance right on the effort we put into different factors.

So, we know we can prevent a lot of cancers, we know we can prevent a lot of cardiovascular disease and a lot of those things can be done, as Michele outlined, and they will have an impact on brain health. And I think the World Dementia Council needs to take that into account. Yes, there is a certain place for individually based awareness, but we have had the reduction without any awareness. And I would also ask you to bear in mind that not only in dementia are they talking about awareness, but they are in cancer, heart disease, and renal disease and muscular-skeletal disease. What kind of lives do we want people to live? One where they have a preoccupation with their health some decades in the distant future? Or do we focus on an environment that encourages or optimizes their ability to be healthy? That is the difference between the individual and creating a healthy environment where we can thrive.



Professor Gill Livingston

Professor of Psychiatry of Older People, University College London

I understand in the UK that the biggest change in behaviour has been charging for plastic bags at checkouts and billions and billions fewer plastic bags are being used without most people consciously changing their behaviour. So, we need both things. We need to be aware of what will change different communities and have some targeting within them. But we absolutely need the changes having less obesogenic environments that will reduce hypertension, diabetes, and obesity together. These things really make a difference.

To go back to the earlier point that Nicola was making, there are quite a lot of people more motivated in this pandemic. The vast majority of people though, who make thousands of steps in their daily life, aren't currently doing it. But if you just change the environment, so it is more effort to get in the car, so people walk to more places, then you change the whole of society. In Britain it is not a coincidence that there are cities where everyone is bigger and cities where everyone is thinner. Because it is the environment not the individual and that makes a much bigger change.

And going back to the point about addressing social inequalities, the reason is not just because it is right, but it is effective. The people who will benefit most will have the least resources. When you target individuals, as others have said, what happens is the people with the most resources and most education change much more than anyone else. The

nanny state (which underpins the individual vs. the community approach in prevention) is ideological, thus opinionated, certainly not evidence-based.



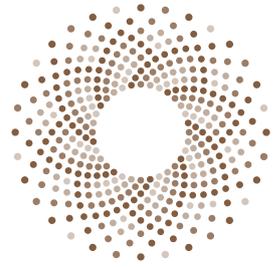
Dr Lindsay Wallace

Thank you for the excellent presentations and discussion. I am wondering how policy-makers can be convinced to invest in very long-term projects such as prevention of NCDs like dementia, when political terms often dictate fiscal investment, public health campaigns, etc.?



Dr Susan Mitchell

I do agree with the various points made that we need engagement and interventions at various levels from national to individual. I think there is much more we need to do to engage policy



more we say this is what you must change yourself the less impact you have. I know since we have talked about hearing aids lots of people I know socially have gone out and got their hearing tested. Do I think there are people in more deprived areas doing it? Absolutely not!

We have to very much think about what we can do at a population level if we really want to make a difference while at the same time, as Susan is doing at ARUK, giving individuals the opportunity to do anything they can to help. But expecting that to be a secondary thing. And when we think about individuals to think about different communities because different communities act in different ways.

Finally, we keep hearing people saying we should tell children in school what they should do to prevent them having dementia. I think this is crazy and a total waste of resources. Children in school think you are old at 25! You can't be thinking about what you are like when you are 80. And we really don't want people thinking their entire life the worse thing you can get in your life is dementia and your life duty is to prevent yourself getting dementia. It has to be much more of a societal thing.

makers to highlight the potential of risk reduction. The growing evidence base helps us to progress this.

 **Professor Gill Livingston**

Alex I think the first thing worldwide about cognitively stimulating population is school to 16 for everyone.

 **Dr Amit Dias**

Looking forward to the WHO's dementia prevention app, Neerja.

 **Professor Gill Livingston**

Heather, work on SPRINT MIND so important. The only drugs to reduce dementia risk to date.

 **Dr Graciela Muniz-Terrera**

Christopher: yes, you are right, we are working together with the Scottish government implementing brain health program.

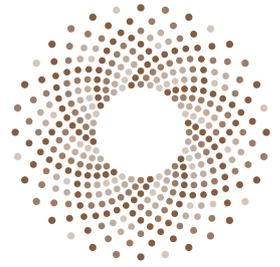


Dr Michele Cecchini
Head of public health, OECD

I would like to follow up on what Carol and Gill just said and add an economic perspective, particularly when it comes to primary care intervention. I think primary care is an underused asset in health systems in OECD countries. But when it comes to primary prevention providing it through primary care, I would make a couple of points. Firstly, it is very expensive delivering individual interventions compared to many other interventions that work at a population level, such as those that addresses the environment. Secondly, the effectiveness of the intervention tends to phase out fairly quickly after the end of the intervention. So as long as the person is followed by the primary care physician the person does have a changed lifestyle, diet and so on.

But if the person stops being followed then between six months and one year, depending on the type of intervention, the individual usually resorts to their previous lifestyle. Thirdly, an equality issue. If we look at access to primary care services if we look across OECD countries it is very unequal across the population groups, but also geographical groups, ethnic groups and so on. So, you benefit groups that need it the least and there is the risk that if it is not well planned or designed a primary prevention intervention delivered by primary care may increase health inequalities.

Having said that when we calculate the cost effectiveness of these interventions, they tend to be cost effective but the return on investment tends to be lower than interventions delivered through changes in the environment.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

The time is running out I will just make a comment from Christopher Chen that is very interesting. He says I agree it may be more inclusive to use the term brain health, and of course dementia prevention, as a mean of including things such as stroke and mental illness and so on. It may also be positive to promote health rather than the absence of disease.

If you go to the chat you will see there is an intense discussion that will be transcribed. I will pass now at the end to Kaarin for some concluding remarks.



Professor Kaarin Anstey

Professor of psychology and director, University of New South Wales Ageing Futures Institute

Thank you it has been a really interesting discussion and I think we have raised so many valid points. A couple of reflections quickly from me. We have to address individual level risk factors and that is where a lot of our research is coming in, but we have to have some way of evaluating where we can make the biggest difference through interventions. The message that came through today was looking at social inequalities – we can make the biggest difference globally by addressing those. The other thing that really struck me is we have a lot of researchers here and we understand the research questions that need answering, such as what’s the level of blood pressure lowering or what is the best combination of multi-domain interventions. But we need to work with strategist. What researchers aren’t necessarily aware of is the political climate and how best to influence policy and that is where we need the World Dementia Council and WHO and all the strategists to help us to make those opportunistic moves. So, we have covid-19, the low hanging fruit, as someone said a lot of people don’t know about risk factors. We are not taking that opportunity of education. There is a lot of low hanging fruit with the internet where we can communicate risk reduction cheaply. So, I think we need to be opportunistic and work with advocacy groups to help us address the big picture in a way that is going to be effective. Work to our strength combing our research and messaging out through political avenues.



Professor Philippe Amouyel

General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Thank you very much for a very interesting discussion you will have the transcript of the chat and the discussion and now I will ask Lenny to conclude the meeting.



Dr Heather Snyder

Thank you to our panelists, our moderators and the WDC (Lenny and Josh) for bringing this conversation together!



Dr Amit Dias

True... good to have the Dementia Prevention Consortium to ensure we work together.



Dr Alex Bahar-Fuchs

Thank you very much for a very stimulating discussion!



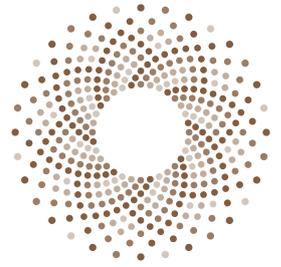
Professor Gill Livingston

Amit, think your work is wider than prevention in schools.



Professor Sandrine Andrieu

Thanks! Good discussion.



Lenny Shallcross
Executive director, World Dementia Council

Thank you to everyone for participating. Thanks to the speakers for participating and thanks to Kaarin and Philippe. We will send you the transcript as Philippe said and will get back to you as we develop the paper. So, thank you and enjoy your morning, afternoon or evening depending on where you are in the world. And if it is your evening after all that I am not sure you'll want a glass of wine but if you do enjoy it! Thank you.



Professor Philippe Amouyel
General director of Fondation Alzheimer (France), professor of epidemiology and public health, University Hospital of Lille, and a member of the World Dementia Council

Please put your ideas on the transcript with your ideas to continue the conversation. Thank you.



Professor Katsuya Urakami

I am Urakami, chairman in Japanese Society of Dementia Prevention (JSDP). Thank you very much for inviting me in this wonderful workshop. In the future, JSDP would like to cooperate with everyone on dementia prevention.



Dr Amit Dias

Great discussion.



Dr Anja Leist

In terms of research efforts to better understand dementia prevention, I would like to mention the **DEMON network**, an international network for applying data science and AI to dementia, who also look at applying AI to questions of dementia prevention.

The World Dementia Council (WDC) is an international charity. It consists of senior experts and leaders drawn from research, academia, industry, governments and NGOs in both high-income and low- and middle-income countries, including two leaders with a personal dementia diagnosis. The WDC has an executive team based in London, UK.

worlddementiacouncil.org

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