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Healthy Ageing:

A public health perspective

A collection of short essays from leading experts

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Sanofi Pasteur MSD has commissioned and funded this pamphlet, and reviewed the content

Contents

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Foreword

Baroness Sally Greengross OBE

Across most of the developed world, society is experiencing unprecedented demographic change characterised by increasing longevity, a growing older population and falling birth rates.

These demographic changes are leading to a lower old age dependency ratio (the ratio of working age to non-working age people), which presents challenges for the social solidarity and long-term sustainability of health, social care and pensions systems.

Arguably the biggest uncertainty facing governments in the context of demographic change is the extent to which spending on health will increase. Spending on health care is likely to see the largest rise of all elements of age-related spending, rising from an annual cost of 6.8% to 9.1% of GDP between 2016/17 and 2061/62 (equivalent to a rise of around £36bn in today's money).[1] The figures could be even higher if tomorrow's older population are less healthy than today's but could fall with further investment in the prevention of disease.

The potential economic costs associated with ill health highlight the importance of preventing disease in the first place. But the focus of our concerns should not be the economic costs of poor health but tackling health inequalities. The average life expectancy of men and women living in poor neighbourhoods in England is seven years lower than those living in the wealthiest areas. Health inequality measured by years of disability-free life is even more unacceptable, with differences of up to 17 years.[2] These trends can be explained by two main factors: poor lifestyle choices and damaging environments.

We have a huge amount of evidence that for example, keeping active and eating and drinking well play a huge part in helping us live to a healthy old age. Yet too many of us are failing to live as well as we could.

The contributions in this report highlight and promote a range of views as to how to ensure a healthy old age. Collectively they contribute to growing awareness of the importance for all of us to take individual action.

But they also highlight a need for policymakers to act. To encourage people to look after themselves we can either force, "nudge" or educate individuals to make the right choices. The smoking ban in public places has had an impact on changing the social norm of smoking and had a positive health impact. Yet the Westminster Government now seems reluctant to regulate or ban, as the recent debate on minimum pricing for alcohol has highlighted. Education is important but are we investing enough in it and do we know what sort of education works? And whilst Government is interested in "nudging" behaviour, changing social norms require significant investment in time and resources. Government must use the mix of nudge, compulsion and education and should focus energies on better understanding what works.

Robert Butler, founder of the ILC Global Alliance introduced the term 'productive aging' in 1983, arguing that "Many people express concern about the costs and dependency of old age… I wanted to stress the mobilization of the productive potential of the elders of society". Productive ageing does not sit separately from healthy ageing. If we want to live and retire well we must do more to deliver healthy ageing across the lifecourse.

Baroness Sally Greengross OBE

References

1. Fiscal sustainability Report. Office for Budget Responsibility. July 2012
2. Marmot M. Fair Society, Healthy Lives. The Marmot Review. Strategic Review of Health Inequalities – England Post 2010

How can the new arrangements for commissioning public health programmes tackle health inequalities in an aging population?

Professor Chris Bentley

There is no risk that the health and wellbeing of an aging population will be a neglected part of the commissioning portfolio, even were there to be no national steer. Nearly all areas, under 'Localism' will be driven by both a concerned electorate and increasingly austere local public sector budgets to find ways to effectively and cost effectively manage the potentially huge burden of ill health accompanying the increasing proportion of elderly. Percentage change at population level will be necessary, and public health as a specialty can bring with it the understanding of system, scale and sustainability to achieve this.

Because of reduced life expectancy, fewer members of communities living in deprived circumstances will survive to be 'elderly'. However, because the same circumstances will also reduce 'disability free life expectancy', many will experience the ill-health burdens associated with the elderly at a younger age. Multimorbidity – the existence of several chronic health disorders in one individual – is a critical and increasing challenge for health and social services. The prevalence of this problem increases with deprivation; people in deprived circumstances having the same prevalence of multimorbidity as more affluent patients who were 10 – 15 years older (Barnett, 2012).

As older people get closer to thresholds that will limit their functional independence, their capacity to adapt to new challenges presented by disease and social and environmental factors reduces substantially. This can bridge socio-economic boundaries. Elderly people from relatively affluent backgrounds, particularly those living alone and becoming socially isolated, can find themselves at disadvantage relative to other individuals, less well-off, but with stronger social and cross-generational networks (Tod, 2012).

In the new commissioning environment, the greater proportion of front-line public health staff and financial resources has been transferred from the previous NHS base into local authorities. This brings public health approaches to bear where there are stronger influences on the social determinants of health and wellbeing. The strong evidence base presented as the Marmot Review Fair Society, Healthy Lives (The Marmot Review, 2010) provides an agenda, largely to be pursued outside health services. This suggests that if evidence based interventions are targeted effectively at different points across the 'Life Course', over time the rates of ill-health and disability in the elderly could be reduced or deferred.

In the meantime, there are a wide range of commissioning organisations (CCGs; NHS England/Local Area Teams; Local Authority Directorates including housing; social care; and now Public Health), commissioning services from a range of public sector, private sector and voluntary and community sector providers. Without co-ordination, this often results in a vulnerable person being faced with a baffling array of individual services, each possibly holding the answer to part of their needs. The result, from a systems perspective, is likely to be a combination of duplication (e.g. of assessments) and gaps (in provision), resulting in patchiness and variation in uptake of evidence based interventions protecting health and wellbeing.

The statutory development of Health and Wellbeing Boards (HWBs), however, provides the means to establish alternative arrangements. In this model, the HWB can bring together representatives of all relevant commissioners for services in a Local Authority area, together with the new body representative of local residents and users of service – Healthwatch. The membership are required, with public health support, to carry out a Joint Strategic Needs Assessment (JSNA), and informed by this to develop an integrated Health and Wellbeing Strategy (HWS) which will measurably improve the health and wellbeing of the local resident population through joint action.

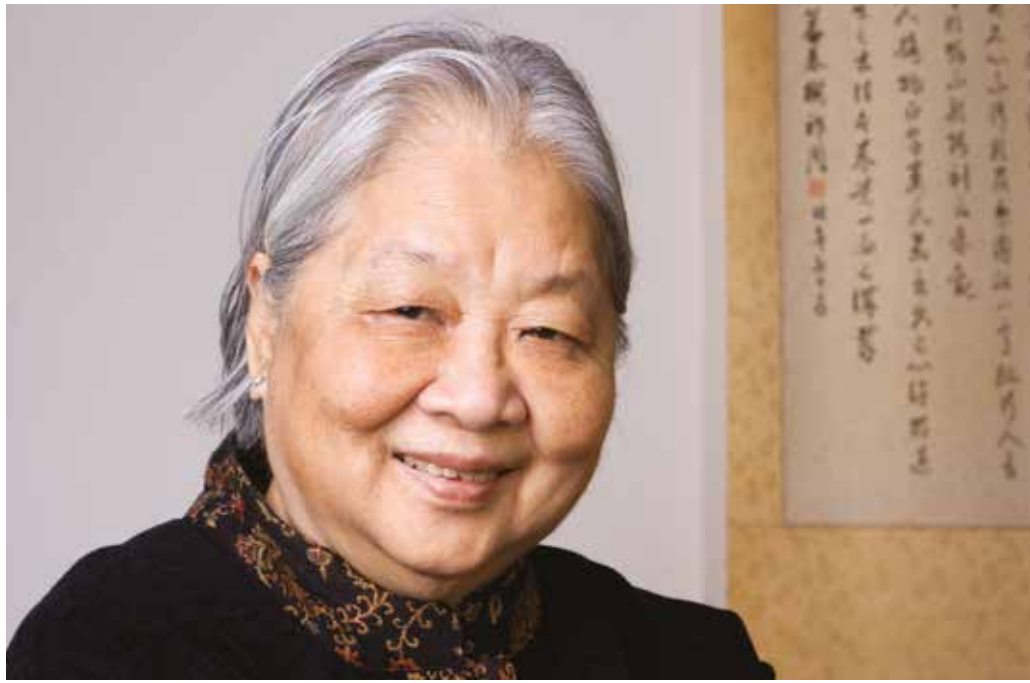
HWBs will be establishing local priorities, but a proportion of these will be contributing to national outcomes frameworks. The Public Health Outcomes Framework has four Domains, and each of these establish possible priorities for wellbeing of the elderly, e.g.

1. Wider Determinants: Fuel poverty
2. Improving health: Falls and injuries in the over 65s
3. Health Protection: Vaccination coverage ('flu; pneumococcus and shingles)
4. Healthcare: Excess winter deaths

Under the auspices of the HWB structure, it should be possible for commissioning agreements to be reached whereby each vulnerable older person has a named key worker who is empowered, supported and has the necessary arrangements to help coordinate a coherent care plan across the necessary range of public sector and voluntary agencies. Whether this is a district nurse, a home care worker from social care or a voluntary sector advocate, they should be able to help bring together supports to help maintain home-based living.

Public health will have a particular role to ensure the arrangements developed are not patchy and ad hoc, but that they seek to raise levels of wellbeing and dignity for the elderly systematically, particularly for the most vulnerable.

Professor Chris Bentley



References

Barnett, K. et al (2012, May 12). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross sectional study. Retrieved July 18, 2013, from www.thelancet.com: DOI: 10.1016/S0140-6736(12)60240-2

The Marmot Review. (2010). Fair Society, Healthy Lives. London: The Marmot Review

Tod, A. et al (2012). Understanding factors influencing vulnerable older people keeping warm and well in winter. Retrieved July 18, 2013, from BMJ Open: http://bmjopen.bmj.com/content/2/4/e000922.full.pdf+html

A Healthy Old Age

Professor Ian Philp

Contrary to widespread belief, old dogs can learn new tricks. Nothing is more important to older people than maintaining their health, independence and well-being (Roberts et al., 1994). This may explain why the highest uptake of disease prevention activities is in older people. When offered, older people are three times more likely to use smoking cessation services than people in their twenties and also have high uptake and compliance with vaccination programmes, blood pressure control and cancer screening (Philp, 2004). But many threats to older people's health, independence and well-being are under-reported, often because older people do not want to bother their doctor, and because they accept ageist assumptions that little can be done to improve health in old age (Philp, 2012).

If we are to extend healthy active life in old age, and maximise uptake of disease prevention activities at a local level, we need practical tools and systems to identify threats to health, independence and well-being and help older people gain access to services and sources of advice targeted at the areas of greatest concern to them.

Based on 25 years of international research, we have identified 49 top threats, which are relevant to older people in poor, middle income and rich countries and have incorporated these into an assessment tool, EASY-Care Standard, which can be used in primary care to quickly assess threats to health, independence and well-being in older people, and mobilise a response based on the priorities of the older person for support (Olde-Rikkert et al., 2012; Philp et al., 2001). The 49 items are organised into seven domains (seeing, hearing and communicating, looking after yourself, getting around, your safety, accommodation and finance, staying healthy, your mental health and well-being). The EASY-Care assessment covers the topics suggested for attention in national policy for public health improvement for older people in England (Department of Health, 2013) including self-reported health and well-being, social isolation, dementia recognition, falls, community safety perception, physical activity, smoking, excess weight, poor diet, cancer screening, vaccination and preventable sight loss.

We have demonstrated efficient methods for using EASY-Care Standard in the UK, either as an electronic self-assessment (Philp et al., 2012), or through primary care screening followed by telephone assessment by trained Age UK assessors. Summary information about identified threats, priorities for support and actions is stored electronically and can be used as a foundation for addressing future care needs. Aggregated data is available for population needs assessment (www.easycare.org.uk).

Randomised controlled trials in the Netherlands have shown that a targeted preventive approach using EASY-Care is cost-effective in improving functional independence and reducing hospital admissions (Melis et al., 2008). Other attempts to introduce systematic health checks in older people have floundered because of lack of evidence of cost-effectiveness (Fletcher et al., 2004).

New approaches such as we have described above, where there is targeted assessment, self-assessment or use of third sector assessors, telephone assessments, and use of modern information and communications technologies offer great promise. These approaches should be evaluated for their costs and benefits, using outcome measures for functional independence and well-being of the older person, carer well-being and impact on use of hospital and long-term care services. Furthermore, health and well-being boards would be supported in their joint strategic needs assessment by having access to aggregated data about the concerns and priorities of older people about their health and care needs.

Achieving better health in old age unites a fundamental human aspiration for ourselves and our loved ones, with the need to secure a financially sustainable future for human-kind. Why would we not therefore give the highest priority to developing and implementing practical tools for supporting these ambitions at a local level?

Professor Ian Philp

References

Department of Health, 2013, Public Health Outcomes Framework for England 2013-16, London, Crown Copyright

Fletcher, A. E., G. M. Price, E. S. Ng, S. L. Stirling, C. J. Bulpitt, E. Breeze, M. Nunes, D. A. Jones, A. Latif, N. M. Fasey, M. R. Vickers, and A. J. Tulloch, 2004, Population-based multidimensional assessment of older people in UK general practice: a cluster-randomised factorial trial: Lancet, v. 364, p. 1667-77

Melis, R. J., E. Adang, S. Teerenstra, M. I. van Eijken, A. Wimo, T. van Achterberg, E. H. van de Lisdonk, and M. G. Rikkert, 2008, Cost-effectiveness of a multidisciplinary intervention model for: J Gerontol A Biol Sci Med Sci, v. 63, p. 275-82

Olde-Rikkert, M. G., J. F. Long, and I. Philp, 2013, Development and evidence base of a new efficient assessment instrument for international use by nurses in community settings with older people: Int J Nurse Study 2013;50(9): 1180-1183

Philp, I., 2004, Better Health in Old Age Report from Professor Ian Philp, National Director for Older People's Health to Secretary of State for Health, Department of Health

Philp, I., 2012, No time to lose, in J. Goodwin, and P. Rossall, eds., Improving later life: London, Age UK, p. 58-61

Philp, I., P. Newton, K. J. McKee, S. Dixon, G. Rowse, and P. A. Bath, 2001, Geriatric assessment in primary care: formulating best practice: British Journal of community nursing, v. 6. 290-295

Philp, I., K. Tadd, and J. Long, 2012, EASY-Care Self Assessment UK National Demonstration Project: Journal of the American Geriatrics Society, v. 60 supplement s4:C131

Roberts, H., T. S. Khee, and I. Philp, 1994, Setting Priorities for Measures of Performance for Geriatric Medical-Services: Age and Ageing, v. 23 154-157

Health is Everyone's Business

Glyn Jones

The health of older people will not be improved by the status quo with its focus on treatment alone, combined with dependency inducing model of on-going support. There is a real momentum building that ultimately will redefine not only the health and social care system and enable its transformation, but to change the conversation with the communities in which people live their lives.

Local Authorities are uniquely placed to be at the heart of the new debate and to exploit the tremendous opportunities that exist with the transfer of public health, perhaps changing the emphasis from "health" (in a treatment sense) to a focus on the "public" and how interventions and events already happening in communities can be tweaked to deliver real outcomes for people.

Of course local government has argued that it is well placed in terms of its local population focus to be at the heart of local communities to deliver such changes. However, there is a need for a change in the leadership style for local government leaders as well as those in health and social care if healthy ageing is to become a reality in this country. So the time has passed for "heroic" leadership in looking at healthy ageing, what is to replace it?

Paradoxically perhaps, one of the outcomes of austerity for local government has been to rethink the offer to the community, the organisational changes which are emerging will actually help shift the silo approach that still can dominate thinking in some areas. Larger functional areas, different professional groups each with their own experience of leadership and authority are coming together. This is helping to think about wider objectives and solutions, particularly around co-production or pooling budgets to achieve the relevant outcomes.

There is no doubt in my mind that colleagues in Public Health have already contributed to the debate and are helpfully "joining the dots" within elements of the public sector. As well as this they have a crucial role in ensuring the emerging health and well being strategies have the necessary focus on "well being" as well as "health". This is helpfully reinforced by an emphasis on empowerment and the responsibility of individuals to help shape their own lifestyle and who ultimately will determine the success of healthy ageing. The challenge of many years of 'professionals' know best will not be underdone overnight. The leadership challenge is to see the goal of healthy ageing and their role within it. Leading across boundaries, not just within separate organisations, collaborative skills rather than controlling ones, influencing rather than directing.
It is worth mentioning here the synergy that can exist between GP Practices and Ward Councillors, both having an interest in their local populations. This new alliance can, if harnessed well, really add value to the strategic commissioning between the NHS and Local Authorities.

Perhaps the issue of loneliness in old age is a worthy example of the challenge to collaborative leadership. Loneliness and isolation impacts on quality of life for older people which itself could increase mortality and morbidity. If not addressed, this will result in expensive and extensive use of health and social care services.
The solutions are complex but achievable if one removes organisational thinking. Critical to this is the voice of older people and creating opportunities for activities that are needed and wanted in local communities. The development of 'state intervention' in its various forms has in some places had the impact of stifling community innovation and a potential reliance on public services, which is severely challenged at this time. Leaders have to work with local communities to enable this to happen and many of the solutions are relatively low cost and potentially self resourcing.

Historically, the development of 'lunch clubs' had easing social isolation at its heart, but there are many other developments occurring now, such as befriending schemes, calling circles, social clubs and networks, community cafes, to name but a few. But the leadership challenge is to ensure organisations are aware of what is on offer so that no door is the wrong door. No one organisation is the 'lead' on resolving loneliness, but together this is a real example of health being everyone's business.

The strength of Local Authorities is in its engagement with the public and the approach to partnership. Nevermore is that strength needed to create the opportunities for a healthy old age.

Glyn Jones

How fast is society ageing and how long will I live?

Professor James Goodwin and Dr Matthew Norton

In 1922, a scientist called Dublin predicted that human longevity would peak at 65 years. Since then, repeated revisions of this prediction have failed to keep pace with the reality that society is undergoing a 'longevity revolution'.

This revolution is global and though some countries are ageing faster than others, population ageing is found in all societies and cultures. Japan is the oldest country in the world, where by 2030 there will be 1 million centenarians - in the UK the number is expected to reach 250,000. Many of the reasons underlying this ageing of society are known to scientists. Initially, changes in infant mortality were seen to be responsible for more of us living longer. Now it is known that reducing the risks of mortality by better medical care, improved standards of living (such as good nutrition, less smoking, cleaner air, better distribution of wealth in society) and better public health are all playing a part. The fastest growing part of the population is now those over 85, with 1.5 million now in the UK, rising to 3 million by 2030. Such a trend indicates that we are facing not just an increasingly ageing society but one that is going to become re-structured from a '3 generation' to a '4 generation' model: the 100 year old parent, the 70 year old child, the 40 year old grandchild and the 20 year old great-grandchild. And that great-grandchild will stand a very real chance of living to over 100.

Not only are more of us surviving to the oldest ages, but the average lifespan itself is slowly increasing. No more is it three scores years and ten – we now know that the life span is not immutable. According to DWP figures, there are 10 million people alive today who will live to be 100 years or more. The oldest person whose real age is known was a French woman, Jeane Louise Calment who died when she was 122.

Is it inevitable that I will become less healthy and diseased as I get older?

Many people fear old age because it is associated with increasingly poor health and disability. Though it is true to say that 'healthy longevity' has not kept pace with 'longevity' itself, many older people reach old age in good health. Evidence from the USA shows that levels of disability predicted in the 1980s as the population aged have not been reached. There are many reasons for this, such as new and better treatment of age-related conditions and better prevention. We now know the process of ageing is malleable, that is, it may be slowed down. And if ageing is slowed down by improved lifestyles then the incidence and risk of ill-health will correspondingly be reduced. Only about 25% of the ageing process is genetically determined which is good news because it means that 75% is caused by environmental conditions and a great deal of that is under the individual's control. For example, it is now known that if cholesterol levels in the blood are kept within normal levels in middle age (45-55), the risk of dementia after 65 years is halved. So, greater emphasis is being placed on the role of prevention across the life course and this, combined with new and better medical interventions and treatments, means that the chances of reaching old age with less ill-health than in previous generations are improving.

Age UK's recently updated Health Care Quality for an Active Later Life report (E1) identified a number of key areas that need to be better treated and managed.

The key areas that emerged were:

1. Dementia
2. Obesity
3. Untreated and uncontrolled hypertension
4. Pain

How should society respond?

In the later years of life, usually after the age of 85, there is an increased risk of frailty. Geriatricians talk about "physiological reserves". In the older patient, the body is less able to maintain normal functioning, or homeostasis, and needs to use natural "reserves" – usually available for recovering from illness or exertion – just to maintain the status quo. But frailty is more than just a physiological concept: the social aspects of later life are just as important.

There are practical examples in the UK of where this broader definition has improved outcomes. Torbay Care Trust supported their change programme by creating a fictitious 80 year old woman living with complex needs, called Mrs Smith. The example incorporated non-medical aspects, recognising the need to successfully address these issues rather than just identifiable medical conditions.

The Torbay example provides a clear indication of the way health and care need to shift. Services must be integrated and a lot more care needs to be delivered outside of hospital – we know too many older people spend too long in hospital after a crisis. This is a very expensive way to care for people and in the vast majority of cases has worse outcomes for individuals. Improvements are not only about changes to the structural fabric of the NHS but also the culture of treatment – it is imperative that medical professionals receive much better training in geriatric medicine and care and that, rather than simply treating the medical conditions of an individual, doctors treat the whole person (including the social and non-medical aspects) and involve them in decision making.

Professor James Goodwin and Dr Matthew Norton

References

(E1) link to http://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Research/Health%20care%20quality%20report.pdf?dtrk=true

Manton KG, Gu XL, and Lowrimore GR. 2008. Cohort changes in active life expectancy in the US elderly population: Experience from the 1982-2004 National Long-Term Care Survey. Journals of Gerontology Series B-Psychological Sciences and Social Sciences 63:S269-S281

Kivipelto M, Helkala EL, Laakso MP, Hänninen T, Hallikainen M, Alhainen K, Soininen H, Tuomilehto J, Nissinen A. Midlife vascular risk factors and Alzheimer's disease in later life: longitudinal, population based study. BMJ. 2001 Jun 16;322(7300):1447-51

Vaccination in older people

Professor Richard Aspinall and Professor Pierre Olivier Lang

Acquaintances who retired a few years ago have spent much of their time, travelling around the globe. They have visited Australia, New Zealand, parts of Asia, both North and South America and have recently returned from travelling round much of central Europe. They plan their trips carefully and noted recently that many of their fellow travellers were in their age group. The growth in the number of older individuals who undertake international travel is something new. In 1957 there were almost 7 million airline passengers in the UK, but by 2007 the number of passengers using UK airport terminals rose to 241 million[1]. Little data exists on current demographic profile of air passengers but a report to the House of Lords in 1998[2] indicated that 9.9% of passengers were over 65 years of age. If we assume, and rough observational studies would suggest that this is a safe assumption to make, that there has been no decline in this percentage it would suggest that the number of older people passing through airports in the UK in recent years may be in excess of 24 million.

One issue which accompanies increased travel is the rapid spread of potential pathogens around the globe. This rapid spread is in part dependant on the ease with which infections spread between individuals in fairly enclosed spaces whilst travelling. We are all aware of the common infections and how rapidly new variants of diseases such as influenza may arise and sweep through the global village but of more importance is the wider distribution of diseases which previously remained geographically localised. For example the vector borne infections such as West Nile Virus, Dengue, Malaria and Chikungunya were considered to be largely absent as diseases in continental Europe[3] but have made a return in recent years. Since 1940 we have seen the emergence of over 300 infectious diseases in the human population[4].

Vaccination will play a critical role in the control of these new diseases and in the spread of more common diseases such as influenza as they have done in the past. Vaccination along with changes in sanitation has changed the life course of many individuals and without exaggeration it has reduced mortality from infectious diseases considerably. In 1900 many died at a young age; infant mortality was high with 33% of all deaths occurring in those under 5 and life expectancy was at 46 for men and 50 for women[5] and infection was the cause of many of these deaths. Life expectancy has now increased dramatically (79 for men and 83 for women), and infections are no longer the major causes of death but may contribute indirectly to it. Vaccination schedules are currently mainly considered to be associated with children or adolescents and often thought of as one of the specialisms of paediatricians. But now we need to take stock of the success of these previous campaigns and consider a vaccination campaign for the whole lifespan. The importance of this cannot be overstated, with recent reports suggesting that many more older adults die of vaccine preventable diseases than young children[6].

In thinking about a scheme to vaccinate older individuals, planners concentrate on what are the prevalent diseases amongst that age group and as a consequence individuals in the UK aged 65 or older are routinely offered vaccination against influenza and pneumococcal disease and more recently a vaccine against shingles is offered to those aged 70 and 79.

One issue that has arisen through the considerations of these programmes is the increased awareness that immunity declines with age. Normally, the immune system protects our bodies from infections and vaccines work by priming our immune systems so that we not only react more rapidly but also specifically to potentially harmful and sometimes life-threatening pathogens. Older individuals are more susceptible to infection with an increase in bacterial infections with age or the awaking re-appearance of certain viral infections such as shingles. This blunting of the immune system with advancing age (often termed immunosenescence) has been described as the consequence of a compilation of events

affecting both the innate and adaptive branches of the immune system. All together, these changes contribute to the less than optimal protective effect of vaccinations in the aging and aged adult population compared to their younger counterparts.

Whilst the immunosenescence process is still far from completely understood, vaccine manufacturers are developing more effective vaccines, based on the most recent advancement in molecular biology and genetics and the better understanding of pathogens infectivity. Manufacturers are designing new formulations and/or new delivery systems to insure protection against emergent pathogens and the most common vaccine preventable diseases. But we must not be complacent, if we do not get vaccinated we are laying ourselves open to possible life threatening infections.

Professor Richard Aspinall and Professor Pierre Olivier Lang

References

1. Office for National Statisics http://www.statistics.gov.uk/cci/nugget.asp?id=1104 2012
2. Committe HoLSaT: http://www.parliament.uk/documents/post/e3.pdf 2011
3. Zeller H, Marrama L, Sudre B, Van Bortel W, Warns-Petit E: Mosquito-borne disease surveillance by the European Centre for Disease Prevention and Control. Clinical microbiology and infection : the official publication of the European Society of Clinical Microbiology and Infectious Diseases 2013, 19(8):693-698
4. Jones KE, Patel NG, Levy MA, Storeygard A, Balk D, Gittleman JL, Daszak P: Global trends in emerging infectious diseases. Nature 2008, 451(7181):990-993
5. Gregory IN: Comparisons between geographies of mortality and deprivation from the 1900s and 2001: spatial analysis of census and mortality statistics. Bmj 2009, 339:b3454
6. Poland GA, Jacobson RM, Ovsyannikova IG: Trends affecting the future of vaccine development and delivery: the role of demographics, regulatory science, the anti-vaccine movement, and vaccinomics. Vaccine 2009, 27(25-26):3240-3244

Healthy Ageing: A Public Health Perspective

Dr John R Ashton CBE

What is the contribution of public health to improve health outcomes of older people?

The bible taught us to expect three score years and ten and for much of human existence that has been as long as most people could aspire to. For many it was much shorter. Within living memory death in childbirth was not uncommon and a significant proportion of children failed to see their first birthdays. Poverty and malnutrition, poor physical environments, large families in overcrowded slums and the lack of preventive measures in the form of vaccination against childhood illnesses all conspired to create conditions under which death from infectious disease was common at different stages of the human lifespan. In 1940 less than 5% of the population of England and Wales were of retirement age (Elderweb).

All that has changed dramatically in the past 30-40 years. Commentators argue about the relative impact of the National Health Service against that of other aspects of the welfare state in tackling Beveridge's 5 giants of Want, Ignorance, Idleness, Squalor and Disease (Beveridge). What is clear is that smaller family size, greater income security, and improvements across the range of determinants of health had begun to have a dramatic effect by the early 1970's. At that point increasing numbers of our parent's generation began to live beyond 70 and into their 80s and 90s with many reaching the elusive centenary and a telegram from the Queen. It is fair to say that the aspiration of four rather than three score years and ten has become a realistic one. At least for those of middle income and who have enjoyed a positive set of health conditions since childhood. Today about 20% or more of us are of retirement age (UK Parliament). The notion of 50:50 and the second half of life from 50 to 100 has attracted increasing attention. The memory of the 1950's television advertisement for a product that '...fortifies the over 40's....' now seems absurd when 50 is the new 40 and the organisation of SAGA providing for the over 50's together with clubs for the over 60's begin to seem anachronistic.

In practice it is now rational to divide 'the second half' into three or four segments:

1. The run up to retirement from 50+ to 65-70, when children have gone and frequently a stocktake of life's journey is in hand. This is a time of opportunity to redress bad habits and become fit for later life, discover new interests, passions and friends whilst looking ahead to the free time to come. Most people are in relatively good health at this stage but much more can be done by way of health promotion and preventive medicine.
2. The 'me' years of democratic aristocracy from 65-75 when it is possible for most of us to look forward to the fruits of 40 or 50 years labour and enjoy an age of productive leisure, study for a degree, start a business or start a new relationship. The tragedy of this period is that a significant proportion of those from disadvantaged communities are excluded from these benefits by virtue of ill health, poverty or other aspects of their social position.
3. The period from 75+ when the biology of old age begins to catch up with us and we slow down, begin to withdraw back into a local frame of reference of family, friends and neighbourhood akin to the childhood years. At this time there is a pressing need to rediscover the assets of a group which is rich in experience and gifts to offer, wise counsel and other contributions based on their social capital and networks. They need supportive environments to release their gifts.
4. Finally the over 85's when increasingly the accumulation of long term conditions and the burden of lifestyle begins to take its toll. Facing the end of life becomes a philosophical, existential and psychological challenge from which there is no escape. There is however a need to address the final taboo through 'Conversations for Life' in which we explore and make known our end of life views with our families and intimates (CFL).

Of course these remarks are generalisations and represent a broad brush view of current trends. They hide within them massive inequalities of both length and quality of life between people who may literally live a few blocks or miles from each other. The relative experiences are still heavily dependent on accidents of birth or fortune. We talk a lot about social mobility but little about health mobility - of the ability of a generation or group to experience improved health throughout life in relative as well as absolute terms. We may all be on an escalator of health improvement, but often it seems that there is no prospect of taking a step forward along that moving escalator. It also seems that the escalator itself may be slowing down or even for some people, going into reverse. Whatever its limitations, this broad brush picture may provide us with a glimpse not only of the opportunities but of the future. Tom Hennell in the north west has analysed the cohort life experiences of groups born at different times in the twentieth century and concluded that the health outcomes of the 'Golden Generation', born between 1925-1945, who have been living well into their 90's may not be emulated by the 'Me ' generation born between 1965-1985 or the children of the 'Social Market', born between 1985-2005 (Hennell.T.personal communication). It seems that the salutogenic confluence of traditional lifestyles and modern medicine may be giving way to a perfect storm of deteriorated lifestyles and the limits that society is willing to invest in medical and social care. To quote the Danish poet Piet Hein,'...problems worthy of attack, prove their worth by hitting back'.

So what is the contribution of public health to improve health outcomes for older people?

Historically, by which I mean from the 1840's and the beginning of the Victorian Public Health Movement, public health practitioners documented through statistics and narrative, the threats to public health and advised those agencies which could intervene what actions were worthwhile. Description, analysis, advice and advocacy were at the heart of the Victorian's often effective interventions.

In today's world where medical research has produced a long list of technical interventions such as coronary artery bypass operations, hip, knee and corneal transplants, which can save lives or dramatically improve the quality of life, public health has been drawn ever more closely into the world of performance management and health and social services evaluation. Important as this work is, and invaluable the skills of trained epidemiologists and public health scientists in ensuring value for money and squaring the triangle of equitable, high quality,

cost-effective services, it is but part of the story.

In addition public health has important things to say about the determinants of health and social and health conditions. The three legs of the public health stool, having chosen your parents wisely, are not only the biomedical, but centrally the social and environmental. The Victorians' fully understood this in their often mechanistic approach to social and environmental engineering. We would do well not to forget this in these days of excess winter deaths from cold conditions, high levels of loneliness and depression contingent on social isolation and the vulnerability of the elderly to motor vehicles in car dominated residential areas.

In former times town planning and public health were Siamese twins and the 'nanny 'state was not only fashionable but mandatory!

In these days, long after the Beatles, when paternalism is declared dead, we struggle to find effective forms of democratic community organisation that protect the vulnerable whilst avoiding paternalism. Nor have we embraced the importance of mobilising and supporting individual and community assets at all ages. But it has to be done if we are to realise the Good Society for all.

The Town Planning dimension is of particular importance, not least to older people. The World Health Organization's Healthy Cities initiative has demonstrated the power and impact of creating a common game plan with pooled understanding and action around the sense of place. Ecological Town and Country planning, as district from the sanitary and functional approach of the past is the way forward. Age-friendly cities, towns and villages are essential and re-engineering where we live to be safe, stimulating and human scale for the later years is a prerequisite for health and wellbeing.

Recognising people's continuing contributions throughout the later stages of life is also important, whether through volunteering, providing family support for the 30% who must cope with dementia (Royal College of Psychiatrists), or to make the desirable outcome of home death ever more a positive choice, through the mobilisation of social support.

And the growing interest of family doctors and primary care teams in public health is essential if the vast burden of avoidable ill-health is to be avoided and we are all to have a fair shot at dying young as old as possible.

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References

Who Cares Wins (2005) Royal College of Psychiatrists London http://www.alzheimers.org.uk/site/scripts/documents_info.php?documentID=1094&pageNumber=5

Beveridge's 'Five Giants', Bitesize, BBC online http://www.bbc.co.uk/bitesize/higher/history/labour/five/revision/2/

CFL, 'Conversations for Life programme'. http://www.conversationsforlife.co.uk/partners.php

Elderweb.com, 'Retirement- changes dramatically over years'. http://www.elderweb.com/article/retirement-changes-dramatically-over-years

Hennell.T.personal communication, Our Life in the North Wests, Regional Director Report, Dr Ruth Hussy, 2008 http://www.nwph.net/nwpho/publications/ourlife.pdf

UK Parliament, Key Issues for the New Parliament 2010, The Ageing population, Richard Cracknell. http://www.parliament.uk/business/publications/research/key-issues-for-the-new-parliament/value-for-money-in-public-services/the-ageing-population/

All references were accessed prior to publication