Preventive Medicine in the Older Patient: A United Kingdom Perspective

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ABSTRACT

Preventive Medicine in the elderly is often regarded as a redundant concept and pre-existing opinions are barriers in the provision of this service. This article explores the concepts of preventive medicine in the elderly from a United Kingdom perspective and examines current trends, opinions and sets out a path for the future. In particular it focusses on the theories of morbidity associated with ageing, economic viability of providing preventive medicine care for the older person and attempts to seek redress for the current situation.

Keywords: Preventive medicine, ethical, compression of morbidity

INTRODUCTION

“When Horatius set out to defend the Roman bridge against the Etruscans, he knew full well that the city elders had already planned to cut it down, sacrificing him and the bridge in order to save the day”. [1] Chronic disease care in the older person, in many ways, is like a Horatian bridge, often present in the background, requiring much attention, but getting little care and in the moment of crisis, easily sacrificed. For too long, this erroneous attitude has led to substandard care and provisions in treating the older person. Protagonists of modern medicine must highlight that there are two techniques to manage disease in the aged. Acknowledge its presence and afford it its due importance or prevent it from developing in the first place. The latter leads us on to preventative medicine in the older person, which is viewed by some as a redundant concept, as the heart of conventional preventative medicine is to prevent long-term damage and the words ‘long-term’ in the older population are often cynically regarded. Indeed, some might argue that there is no role for preventative medicine in the older person; however, geriatricians and other physicians caring for the older person must examine this null hypothesis by scrutinizing the role of preventative medicine in the older person and employ appropriately compelling arguments to firmly entrench its applicability.

PREVENTATIVE MEDICINE IN THE MODERN DAY

Preventative medicine or preventive medicine is the science devoted to reducing the burden of disease by preventing its
occurrence [primary prevention], progression [secondary prevention], and complications [tertiary prevention].[2] One can thus conclude that almost all facets of present day medicine are encompassed under the umbrella of preventative medicine.

The concept of disease prevention and health promotion goes back many centuries and excerpts from Chinese,[3] Anglo-American,[4] and European history[5] serve to emphasize this, however, the formal recognition of the right to health was internationally adopted in The Universal Declaration of Human Rights, 1948, which affirmed through Article 25 that, ‘everyone has the right to a standard of living adequate for the health of himself and of his family’,[6] thus placing a positive moral obligation on governments for health provision and promotion.

This mandate has been adopted by the UK Government and indeed may be considered a legal obligation under Article 2 of the Human Rights Act, which promotes the ‘right to life’. [7] The more recent, Equality Act 2010 [8] acts as a protector of the rights of older person by forbidding any age-related discrimination. Having acknowledged preventative medicine as an important facet of modern day medical care, it would be interesting to observe its operation in the United Kingdom.

PREVENTATIVE MEDICINE IN THE UNITED KINGDOM

Preventative medicine in the UK falls under the remit of the Department of Health, which has a number of umbrella institutions fulfilling this mandate.[9] Its primary responsibilities include ‘health protection', ‘health improvement,' and ‘health inequality' issues. These domains of preventative medicine broadly fall under the remit of Public Health, and indeed, Acheson described Public Health as, “the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of society”. [10] Preventative public health medicine seeks to set out implementation programs to reduce the burden of disease and in order to do so; it relies on a finite resource of public funding and justifies its expenses through a process of health impact assessment.[11,12]

It is a well-accepted fact that the Government cannot provide for every possible health intervention and the basis of its monetary allocation is on a utilitarian distributive principle of, ‘maximum good for maximum people’. [13] Indeed, the Policy Appraisal and Health 1995,[14] Saving Lives 1999,[15] and Choosing health 2004[16] document and elaborate the mandate of Health Impact Assessment as a viable and justified appraisal tool influencing health and more specifically preventative medicine expenditure. This health impact assessment policy has wide ranging effects on all resource aspects of our healthcare and although there is controversy surrounding the implications of these economic appraisal tools, measuring the impact of preventative medicine in the older person is germane for future policy development and allocation of resources.

DEMOGRAPHIC TRANSITION OF OUR SOCIETY

The changing demographic fabric of our modern society has influenced our attitudes and approach to caring for the older person. We no longer have arbitrary cut off points defining old age and indeed variations between chronological age and biological age are well-recognized. [17] The transition to old age, which usually mirrors the retirement age, is now viewed with considerable fluidity and is recognized to vary across different strata of society. Indeed, the Carnegie Inquiry into the ‘third social age of life’, that is, life after retirement, highlights the problems of adopting a fixed social structure defining aging, as this structure fails to represent individual circumstances and choices.[18]

The population pyramid of the United Kingdom projects the relative and absolute increase in the proportion of the older population, and the data acquired from the Office of National Statistics after the 2001 census shows that nearly 33% [19.8 million] of the population is above the age of 50, about 16% is greater than 65, and about 2% is above 85 years of age.[19] Projections for 2031 indicate a 37% increase in the over 50s and the over 85s will comprise of nearly 4%. This proportional increase in the aging population is reflective of both, declining mortality due to advances in health care and a reducing birth rate.[20]

Thus, we can acknowledge two facts. First, the classical correlation of the ‘older person’ with either retirement or chronological age is not an absolute concept, and second, the proportion of older people in our population is set to increase.
This raises several issues of the economic viability of our nation, and provision of services and justification of healthcare expenditure for the older person in the future. The natural assumption of this proportional increase of the older population is that of the increasing economic and healthcare burden on our society. The question that we have to ask is whether this assumption is necessarily true? If so, what can we do to reduce this burden?

**STEP UP! PREVENTATIVE MEDICINE IN THE OLDER PERSON**

**The demographic argument**

The above supposition of a proportional increase in healthcare costs to match the increase in populations of older people is not an absolute. We take our cue from the ‘compression of morbidity’ hypothesis.[21] We know that human beings have a fixed biological ‘life span’ and with improvement in health services, our ‘life expectancy’ is slowly approaching this biological constant. Now, if there is a means of postponing the age of onset of disability or morbidity, it can be logically inferred that the overall period of disability or morbidity will be compressed into fewer patient years. Put simply, if we prevent or delay the effects of chronic disease morbidity in our older populations, we reduce the overall burden of disease and thereby the overall cost to the nation. This hypothesis has revolutionized the way we approach the care for older persons and has forced us to focus on the word ‘prevent’. Opponents of the theory will point out that the hypothesis is valid only if the proportional decline in the rate of onset of morbidity is greater than the increases in life expectancy, nevertheless, protagonists of preventative care in the older person will cite this theory in demonstrating that reducing morbidity impacts greatly on the overall health of a nation.[22]

**The economic argument**

The logical extension of ‘compression of morbidity’ translates into economic benefit. Some might question this concept by stating that an increase in life expectancy achieved by preventive medicine will naturally require health resources to further the care of those lives saved and also to implement preventive medicine programs.[23] Thus, opponents of preventive medicine in the elderly will state that it is an increasing burden rather than a benefit, as it leads to increasing costs in caring for older people, who might benefit less than their younger counterparts. There are a number of moral and economic flaws in this argument.

Assuming that we live in a society that has not yet given up on caring and treating our older counterparts, we should be aware that this segment of the population is likely to be disproportionately affected by disability and morbidity due to chronic disease as compared to a younger individual. This means that should we decide to take away or reduce the preventive medicine resources from the older person, the impact of a chronic disease would be far greater in this age group and this would lead to overall increased healthcare costs. Thus, as long as we have not relinquished caring for the older person altogether, the very thought of abolishing preventive medicine for this group is economically counterintuitive.

From a purely fiscal perspective, we know that there are a number of cost-effectiveness studies that refute preventive medicine’s impact on reducing the healthcare burden.[24] The reasons for this are varied. First, it would do no harm to admit that not all preventive medicine strategies are either useful or appropriately targeted.[25,26] Second, assessing cost-effectiveness is extremely difficult and nearly impossible in certain cases, such as cancer screening[27,28] or lifestyle interventions. Finally, the very process of cost-effectiveness analysis is beset with intrinsic flaws and is not always representative of the exact economic advantage conferred by an intervention.[29] In all, it would suffice to say that the true economic sense of preventive medicine is not simply in the application of blanket preventive medicine strategies for all diseases; rather a targeted, controlled, well-researched, and illness-specific preventive medicine strategy.

Having shown that concentrating on preventive medicine in the elderly is not only demographically and statistically viable, but also of immense financial prudence, it would be useful to examine some of the pre-existing arguments and prevailing notions, which limit the provision of such care in our society.

**BARRIERS AGAINST PROGRESS**

**Societal values**

Those who cite the ‘fair innings’ argument[30] to siphon away care and resources from the older
person, must realize that not only is this not true, but it also smacks of being discriminatory. It is plainly obvious that we are more likely to seek help in our older years and it is for this contingency that we spend our lives working and saving. To deprive someone of a healthcare intervention simply on the basis of age rather than the potential to benefit from that intervention seems unjustified.\[31\] It must also be highlighted that not all those who have lived longer have used more resources and it makes no sense to equate a ‘fair innings argument’ with ‘fair resources rationing’. Even as intuitively compelling arguments are made about resource competition between a 30-year-old patient and a 90-year-old patient, adjusting the age parameters even slightly produces significant unease. The fact that protagonists of the above-mentioned argument are comfortable in weighing up lives of people based simply on their age also sits uncomfortably with ethicists, who believe in the ‘sanctity of life’\[32\] and ‘equality’\[33\] principles for older people. Although our society seems to be recognizing these inherent ageist views as biased and is slowly moving toward that utopian goal of health equality, we must ensure that the momentum carries through.

**Inequalities in health rationing**

The economic impact of health intervention is predominantly measured by the balance of cost and disease outcome.\[34\] There are a number of cost analysis formulae and each has its own application and limitation. It would be interesting to analyze the commonly used Cost Utility Analysis, which incorporates both the qualitative and quantitative effects of an intervention and offsets them with the cost of the intervention. Enter QALY!

QALY stands for quality adjusted life years\[35\] and is a favored ‘technological appraisal’ tool of the National Institute of Clinical Excellence. It is a product of the treatment-enhanced life expectancy and quality of life, and by accommodating both life expectancy and the quality of life in assessing the impact of an intervention, it claims to be a fair and just indicator for allocation of resources. This, however, may not necessarily be the case when it comes to healthcare allocation for the older person. There is controversy in the applicability of QALY in the older population, as we are still not clear as to what constitutes a good quality of life nor can we accurately predict life expectancy.

Quality of life is a subjective term and refers to the ability of a person to lead a healthy and fulfilling life.\[36\] Indeed, Carr et al.\[37\] argue Calman’s original hypothesis,\[38\] which states that quality of life is a measure of the difference between our expectations of health and our experiences and it is plain to see that there will be significant perceptual variations. It is also arguable that a small change in the ‘quality of life’ outcome score, which may seem insignificant to a younger population, may be valued to a much greater extent by the older person. It is also quite obvious to see that life expectancy scores of the older population are going to be much lower than those of the younger groups. This means that comparison of an intervention between two groups of populations [young and old] is bound to be biased and the question of universal standardization, or at least a UK standardization, of economic appraisal tools, remains a potent one.

In spite of these rationing and societal barriers limiting resource allocation to the older populations, much progress has been made over the last few years. Before we attempt to highlight a path for the future, it would be useful to assimilate our gains and look back on the advances and benefits conferred by providing a preventive medicine policy for the older person.

**WHAT HAS BEEN ACHIEVED THUS FAR?**

The impact of preventive medicine in the older person has been tremendous. Increased focus on caring for the older person, the publication of the national service frameworks\[39\] and the rise of geriatrics as a speciality has meant that diseases of older age have regained prominence. There is also an increased impetus on the research of diseases affecting the aged and determining a means of prevention. Although it would be difficult to encompass all the relevant preventive medicine strategies; specifically, smoking cessation initiatives,\[40\] community influenza programs, the national stroke prevention strategy,\[41\] exercise programs for the elderly,\[42\] national dementia strategy,\[43\] falls prevention strategies,\[44\] and cancer screening programs\[45\] are among a few initiatives that have all worked to reduce the overall burden of chronic disease in older persons. More importantly, there seems to be a developing consensus in
acknowledging the value of preventing and treating illnesses in the elderly, previously regarded as a burden of age.

THE PATH FOR THE FUTURE

Preventive medicine for the elderly must never become a redundant concept. Advances in medical sciences coupled with demographic changes in our society will mean that there will always be a need to ensure equal distribution of scientific benefits to further the role of preventive medicine for the older person. There is still work to be done in order to improve cancer screening strategies, secondary stroke prevention, continence care, and palliative care programs. The Age UK policy cites targeting frontline decisions and organizational behavior in order to counter any age-related discrimination. More importantly, there is a profound need to fight inherent ageist perceptions among physicians and organizations alike. In the wake of the Equality Act and its implications on health, social care, and the public sector, it would also be useful to look at things from a legal angle, should pleas and persuasions fail.

EXPLORING THE LEGAL ANGLE

The law provides safeguards in ensuring fair allocation of healthcare resources. As protagonists of preventive care for the elderly, we must not only understand these legal pathways, but must also be prepared to use this knowledge. Implicit to the process of rationing are statutory means of challenging these decisions. The UK courts possess the competence to ensure accountability of healthcare provision decisions. In cases such as *Eisai versus NICE* and *Servier Laboratories Ltd. versus NICE* the courts have demanded transparency on the part of NICE in order to justify its decisions for withholding drugs for older people. Similarly, in *R. versus North Derbyshire HA Ex p. Fisher*, the courts held the health authority’s decision to withhold Multiple Sclerosis treatments as irrational. These cases among others serve to highlight that perceived unfairness in rationing decisions can be tested in court.

Even as procedural fairness can be tested in courts, it must be noted that courts do not possess the expertise to question clinical decisions about the efficacy or treatment priorities, nor do they have the mandate to decide which socioeconomic or moral values should be used to make these decisions. In other words, the law does not decide upon policy, but only serves to uphold its fair implementation. Protagonists of preventive care in the older person must realize this and continue campaigning for reforms in public policy.

CONCLUSION

The question is not whether we adopt a utilitarian or an individualistic policy. This is not a debate of ‘one versus many’, it is rather a comparison of two separate populations. Any differential in their management can and should be viewed as a form of discrimination. Preventive medicine has a pivotal role to play in reducing our overall healthcare burden and especially so in the case of our older population. The viability of this program must be ensured in order to sustain not only a healthy younger workforce, but also to ensure that the people they care for lead healthy and fulfilling lives. Jacques description of the ‘seventh age of man’ is feared by all. Let us never forget that preventive medicine is our asset in avoiding or at least delaying this consequence.

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