



TOBACCO AND OLDER ADULTS: A LITERATURE REVIEW

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1. INTRODUCTION: What the literature review is

This document is an update of the 2004 Tobacco and Inequalities Literature Review, originally written during the third phase of ASH Scotland's Tobacco and Inequalities project. More detail on the Tobacco and Inequalities Project is available on the following section of the ASH Scotland Website - www.ashscotland.org.uk/ash/5371.html

An update to the 2004 document was felt to be necessary in light of the completion of the project cycle for the ASH Scotland Tobacco and Inequalities Initiative Small Grants Funded Projects and further developments in the published research literature around tobacco use and older adults.

Since 2004 there have also been national and local policy developments, publications, resources and research dealing with the issues surrounding tobacco and older adults. The aim of this document, as with the original, is to provide a summary of relevant research (focussing on journal published, but also relevant unpublished work), policy drivers, and raw prevalence/demographic data around the topic of tobacco and older adults. No prior knowledge of the subject is assumed.

Since 2004 there have also been Government policy developments and publications dealing specifically with the health inequalities faced by older adults in Scotland today. Naturally, the passing of time has also given us a better picture of Scotland's changing demographic makeup, through routine national and survey data.

The aim of this document, as with the original, is to provide a summary of relevant research (focussing on journal published, but also relevant unpublished work), policy drivers, and raw prevalence/demographic data around the topic of tobacco and older adults. No prior knowledge of the subject is assumed.

For ease of reference, the main body of this document (sections 3 to 6) cover the core subject matter, including:

- *the background and context of tobacco use among older adults*
- *the health impacts of tobacco use for older adults, and benefits of quitting*
- *the challenges of smoking cessation with older adults*
- *what we know about successful approaches to cessation with older individuals.*

While the background and context section (section 3) deals with issues such as population demographics, for the reader that wishes to investigate in more detail, a larger appendix of data has been collated and is presented in section 8, covering the following areas:

- *defining the term 'older adults'*
- *a discussion of the size of older population in Scotland, future population projections and regional variations*
- *demographic and socio-economic profiles of older adults in Scotland*

Any suggestions of omissions, questions, or comments on this review are invited, and should be directed to: enquiries@ashscotland.org.uk

For more information about the work of ASH Scotland, the Tobacco and Inequalities project or Partnership Action on Tobacco and Health (PATH), please visit the ASH Scotland website or get in touch with us by phone or email at the address given on the cover of this document.

2. METHODOLOGY: Conducting the literature review update

The methodology for the original 2004 review is presented below:

- *details of relevant literature and contacts were noted as they came to light (over a 12-month period beginning in May 2003 and ending in June 2004)*
- *searching the relevant section of the ASH Scotland library*
- *PubMed database keyword searches (using terms such as 'older adults', 'over 60s', 'tobacco' and 'smoking')*
- *keyword public domain internet searches using a search engine to find web-based information outside of published journals*
- *focused searches on selected websites: ASH Scotland, NHS Health Scotland, the Scottish Government and the Health Development Agency (the Health Development Agency's functions were transferred to the National Institute for Health and Clinical Excellence in 2005)*
- *searching for relevant information posted on Globalink, an online tobacco control community and listserv.*

During this update, a repeat of the above methodology was conducted, with database literature searches set up to search for research published between the start of the 2004 calendar year to the start of the 2010 calendar year (i.e. documents published since the review was originally conducted). For published research the ASH Scotland Information Service's weekly research digest was used to identify literature published in the desired timeframe. (A catalogue of published research on tobacco and older adults from 2007 to present is available on the ASH Scotland website at: www.ashscotland.org.uk/ash/7853.html).

Due to time and resource constraints detailed scrutiny and critique of the methodology of each study was not carried out as would be the case in a systematic review or meta-analysis. Hence this literature review does not make any judgements on the rigour of the research that is referred to. However, when deemed appropriate, information is presented about the sample and methodology used to give context to the research that is cited, particularly when conclusions are drawn from observation or case report only, to allow the reader to make their own judgements regarding the conclusions of the research.

3. TOBACCO AND OLDER ADULTS: Background and context

3.1 Tobacco and tobacco policy in Scotland

The use of tobacco remains the single largest preventable cause of ill-health and premature death in Scotland, also being a significant indicator, and cause, of health inequalities. Scotland has more than a million adult smokers,¹ making up approximately one-quarter of the adult population.

Each year, an estimated 13,500 people die from tobacco-related diseases: lung cancer, other cancers, cardiovascular diseases, and respiratory disorders.² In addition to the risks posed by active smoking there is also a body of evidence highlighting the health risks associated with exposure to second-hand smoke.³

There is a strong correlation between smoking and deprivation. People on low income are more likely to smoke cigarettes and are more likely to smoke more cigarettes per day on average. In 2008 45% of Scottish adults smoked in the most deprived tenth of areas, contrasting with just 11% of adults who live in the least deprived tenth.⁴

A Scottish study published in 2009⁵ examining the health outcomes of a cohort of approximately 15,000 Scots recruited in 1972-76 in Renfrew and Paisley demonstrated powerfully that both male and female smokers in all social positions had poorer survival than never smokers in even the lowest social classes. In other words, smoking itself was a larger source of health inequality than social position.

The scale of harm caused by tobacco smoking in Scotland has been subject to a great deal of research, and corresponding action in public health policy over the last decade.

For the reader interested in studying the general background of tobacco control, and public health in Scotland, the following documents are recommended (most recently published first):

- ***Scotland's future is smoke-free: a smoking prevention action plan, 2008***
www.scotland.gov.uk/Publications/2008/05/19144342/0
Scotland's future is smoke-free sets out the Government's priorities and actions for youth smoking prevention.
- ***Better health, better care, 2007***
<http://www.scotland.gov.uk/Publications/2007/12/11103453/0>
This Action Plan sets out the Government's programme to deliver a healthier Scotland by helping people to sustain and improve their health (particularly in disadvantaged communities) ensuring better, local and faster access to health care. It also details targets for

smoking cessation services in Scotland.

- ***Towards a future without tobacco, 2006***
<http://www.scotland.gov.uk/Publications/2006/11/21155256/0>
A report of the smoking prevention working group, it makes a series of recommendations on measures to prevent young people from becoming smokers.
- ***A breath of fresh air for Scotland, 2004***
<http://www.scotland.gov.uk/Publications/2004/01/18736/31541>
This document takes forward a commitment to review national tobacco control policy and to set out a new tobacco control action plan. The report describes actions that give most help to disadvantaged communities, where the highest rates of smoking are found.
- ***Reducing smoking and tobacco-related harm – a key to transforming Scotland’s health, 2003***
<http://www.healthscotland.com/documents/174.aspx>
This document, produced by ASH Scotland and NHS Health Scotland, makes recommendations of further action that can be taken in Scotland to reduce ill-health caused by tobacco.
- ***Towards a Healthier Scotland, 1999***
<http://openscotland.net/library/documents-w7/tahs-00.htm>
This Scottish Public Health White Paper stresses a commitment to reducing smoking and states initial targets for smoking reduction in three target areas - young people, pregnant women, and adult smokers.
- ***Smoking Kills, 1998***
<http://www.archive.official-documents.co.uk/document/cm41/4177/4177.htm>
The 1998 UK White Paper on tobacco, *Smoking Kills*, emphasises the major health risks of smoking and sets targets to reduce smoking rates among young people and pregnant women, and to provide more support for adult smokers who want to quit.

As a result of recommendations given in these documents, campaigning action, and public support, Scotland has taken its place in a vanguard of nations who are tackling the adverse health outcomes of smoking through far-reaching policy actions.

These actions include: comprehensive bans on tobacco advertising; large-scale investment in a national network of stop smoking services through the NHS; a ban on smoking in enclosed public places; text and picture warnings on cigarette packs; and, most recently, the prohibition of self-service cigarette vending machines and a ban on the display of cigarettes at the point of sale due to come into force between 2011-2013.

3.2 Older adults

The latest estimate of Scotland's population (on June 30, 2008) is 5,168,500, a rise of 24,300 on the previous year and the highest since 1981 and the number of births the highest since 1995.⁶ Within this rising population, there is also a trend, as life expectancy increases, for a relatively higher number of older adults.

The most recent data from the Registrar General's Annual Review of Demographic Trends from 2008⁷ shows that, in the 10-year period between 1998 and 2008:

- *the overall population has increased by around 1.8%*
- *there is a 9% decrease in the number of children under 16*
- *there is a 10% increase in the number of adults aged 60-74*
- *there is a 13% increase in the number of adults aged 75 and over.*

At the last full population census (in 2001) there were around 358,900 people aged over 75 in Scotland. When the next full census is due in 2011 this number is expected to have increased. Between census sweeps, estimates from the Registrar General's review indicate that, in June 2008, the number of people in Scotland aged 50 and over was 1,844,703; 60 and over 1,168,925; 65 and over 856,543; and 75 years and above 393,179.

These trends in ageing are projected to continue over the coming decades. By 2031 the number of people aged 50 and over is predicted to rise by 28% and the number aged 75 and over is predicted to increase by 75%.⁸ As a result the health of Scotland's older adults is receiving increasing attention.

As rates of long-standing illness and disability increase with age, older people tend to have a much greater need for the health and social services than the young. In recent years there has been a marked increase in preventative interventions for older people and an awareness of the need to promote healthy lifestyles. This growing awareness has resulted in a series of Government publications focussed on older people, which the reader may refer to for background:

- ***All our futures: planning for a Scotland with an ageing population, 2007***
www.scotland.gov.uk/Publications/2007/03/08125028/0
- ***Better outcomes for older people, 2005***
www.scotland.gov.uk/Publications/2005/05/13101338/13397
- ***Adding life to years: report of the expert group on healthcare of older people, 2002***
www.scotland.gov.uk/Publications/2002/01/10624/File-1

This growing awareness has resulted in a series of Government publications focussed on older people, which the reader may refer to for background:

3.3 Developing appropriate services

The policy documents listed above are not intended to be an exhaustive list, but rather an introductory overview of the key frameworks relevant for professionals working to provide services (including health promotion and smoking cessation) for older adults.

It is useful for those involved in planning, developing and providing services to have an understanding of the age structure of the local population, the concentration (or dispersal) of older adults and the socio-economic features of the community. Professionals wishing to provide smoking cessation and tobacco education initiatives should be encouraged to create detailed profiles of the population living in their area in order to devise informed approaches to tobacco education and smoking cessation.

While it is important to be aware of the influence that age can have on a person's lifestyle and health, it is equally important not to become too attached to population stereotypes or make assumptions about individuals based on one factor alone, whether it be age, ethnicity, or any other characteristic. Older people are not a homogenous group and their interests, needs, and wishes can vary as widely as those of the general population.

For further information on older adults, including definitions of the term itself, the reasons behind population ageing; future population projections; the older population in different areas of Scotland; health and use of services and more detailed socio-demographic profiles, please refer to the appendix.

4. TOBACCO USE IN OLDER ADULTS

4.1 Smoking prevalence amongst older adults

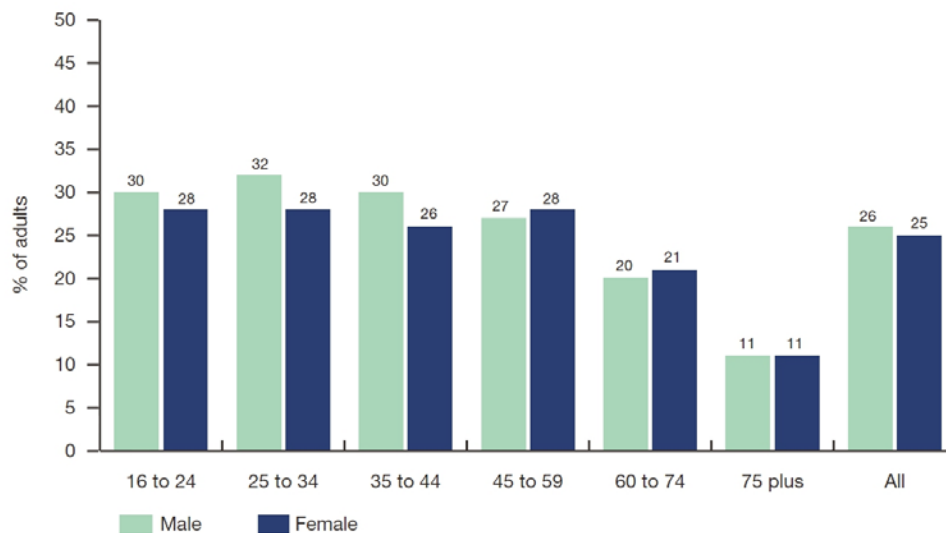
With the gradual ageing of both the Scottish and UK population, older smokers are becoming an increasingly important population subgroup.

In Scotland, the most recent data we have, from the 2007/08 Scottish Household Survey,⁹ suggests that just over 20% of the 60-74 year old age group are current smokers. For those over 75, the smoking prevalence drops to around 11%. Estimations from survey data lead us to think that there are somewhere in the region of 160,000 smokers in Scotland aged 65 and over.¹⁰

Whilst the prevalence of smoking for older adults is generally lower than the average for the population as a whole (the average Scottish smoking prevalence being around 25% in the 2007/08 Scottish Household Survey), the increasing number of older adults in the population means that the total number of smokers in this age group can be expected to rise as time goes on.

Figure 1, below, gives the prevalence of smoking in Scotland from the Scottish Household Survey in 2007/08.

Figure 1: Smoking prevalence in Scotland 2007/08 by age, from the Scottish Household Survey



Source: Graph reproduced from the 2007/08 Annual report of the Scottish Household Survey¹¹. © Crown copyright 2009.

In men, the prevalence of smoking tends to decrease with age from 25 onwards. For women between 16 and 59, there is no clear relationship

between age and smoking prevalence, rising and dipping as age increases. For women older than 59 there seems to be evidence of a decline in smoking as age increases, with the prevalence dropping markedly in the 60-74 and 75 plus brackets.

As discussed below, older men are also more likely to be heavy smokers and to smoke pipes or cigars.

Heavy smoking in older adults

In the most recent 2008 Scottish Health survey¹² 9% of the population were heavy smokers (smoking 20 or more cigarettes per day), compared with 7% of female smokers. Amongst smokers, the heavy smoking prevalence was 34% for men and 28% for women. Conversely, women were more likely to be light smokers (under 10 cigarettes per day). Men around the age of 50 appear to be more likely than any other group to be heavy smokers; as men grew older, their chances of being a heavy smoker increased until the 45-54 age bracket where it peaked at 54% (39% being the equivalent figure for heavy-smoking 45-54 year old females), holding steady at around 50% till age 75+ where it declines to around 21%.

A study on the prevalence and characteristics of heavy smokers in England found 'hardcore' smoking (defined as going less than a day without cigarettes in the past five years, having made no attempt to quit in the past year, having no desire to quit and having no intention to quit) was associated with nicotine dependence, socio-economic deprivation and age¹³. Of these age was most strongly associated, with 30% of smokers aged 65 and over classified as heavy smokers. However a more recent study did not find age predicted hardcore smoking in a sample of individuals accessing primary care, though the study did find that hardcore smokers were more likely to be male.¹⁴

Pipe and cigar smoking

Another trend of note among older male smokers is pipe and cigar smoking. The most up-to-date Scottish Health Survey (2008) dropped questions on pipe and cigar smoking, so the most recent Scottish Health Survey on pipe and cigar use remains the 2003 Health Survey,¹⁵ showing that 3% of the men in Scotland surveyed smoked cigars or pipes. Some older men only consume these tobacco products and do not smoke cigarettes. Very few women report smoking pipes or cigars.

The Scottish Health Survey combines the smoking of cigars and pipes into one category for respondents, so it is difficult to ascertain the relative proportions of each. The UK wide General Household Survey¹⁶ distinguishes between the two and found that only 1% of men in 2008 reported smoking a pipe, with nearly all being 50 and over. Only 2% of men smoked at least one cigar a month in 2008, and a barely measurable number of women. Cigar

smoking is slightly more common among men ages 30+ than it is among men aged under 30.

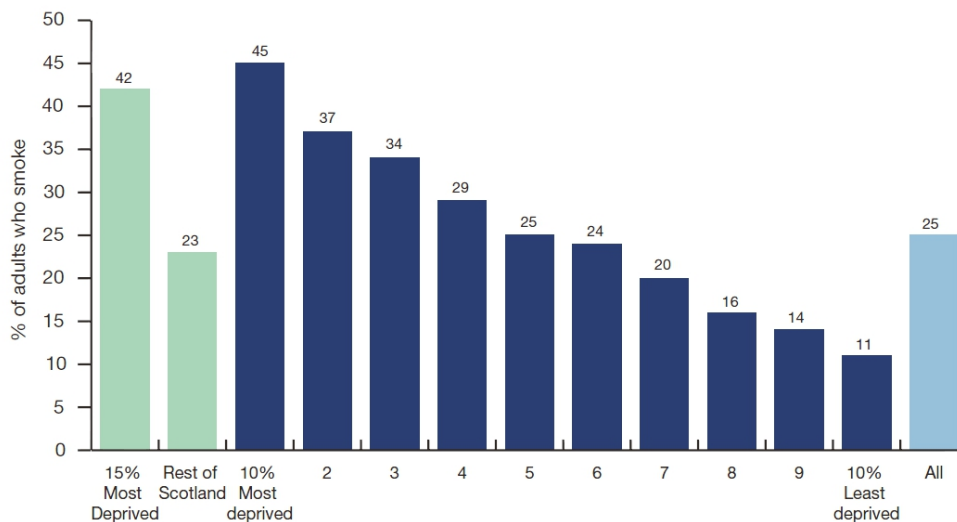
Other factors influencing tobacco use in older adults

As with smokers of any age, deprivation is strongly associated with health inequalities and higher levels of tobacco use. In the most deprived communities in Scotland, smoking rates are similar to those last seen nationally in the 1970s.¹⁷

The most recent Scottish Health Survey found that smoking levels were highest among men and women in routine and semi-routine households, and the lowest among those in managerial and professional households with the prevalence of smoking in the former being double that of the latter.¹⁸ Smoking contributes more than any other identifiable factor to widening health differences between socio-economic groups among older people, as well as in the population as a whole.¹⁹

Figure 2, below, gives the most recent data on prevalence of smoking by Scottish Index of Multiple Deprivation decile from the 2007/08 Scottish Household Survey.²⁰

Figure 2: Smoking prevalence in Scotland 2007 by SIMD decile, from the Scottish Household Survey



Source: Graph reproduced from the 2007/8²¹ Annual report of the Scottish Household Survey. © Crown copyright 2009.

The clear effect of deprivation on smoking prevalence, as measured by the SIMD²² is apparent.

This is important to consider when working with older adults as it is well documented that the average income of pensioner households is much lower than households containing adults of working age.²³ Stressors associated with financial hardship and isolation can contribute to greater cigarette smoking as a coping mechanism.

A person's housing status and family circumstance can also influence their tobacco use. Living with a spouse who smokes, being widowed, divorced or separated and living alone have been found to be associated with increased smoking among men and women.²⁴ Naturally, living with a smoker is also likely to increase an individual's exposure to second-hand smoke.

4.2 Impact of tobacco use

Health Effects

The effects of smoking on health are extensively documented; this section will focus on key sources, and those that relate specifically to older adults for brevity. Tobacco use is the single biggest preventable cause of ill-health and premature death in Scotland. Research from the USA suggests that one in three older smokers die prematurely, losing on average 12-15 years of life from their projected normal life expectancy, compromising their retirement years.²⁵

In Scotland an estimate 13,500 people die every year from tobacco-related diseases, including heart disease and cancers.²⁶ Smoking is considered to be causally associated with a number of cancers, including lung, pharynx, larynx, oesophagus, oral cancers, bladder, prostate, pancreas and kidney.²⁷ Approximately 40% of all cancer deaths and almost 90% of lung cancer cases can be attributed to tobacco.²⁸ There are also serious health risks associated with passive smoking.²⁹

The health of older smokers is most imminently at risk. Cancer, heart disease and stroke, respiratory disease and injuries account for over 80% of all deaths in people aged over 65.³⁰ Many of these causes of death are associated with smoking. In older adults, as in the general population, giving up smoking reduces risks of stroke, heart disease and lung cancer, and also reduces the risk of death as a result of respiratory infection.

Smoking is not only responsible for a significantly increased mortality, but also a (more difficult to quantify) increased risk of illness and a *reduction in quality of life* in older adults. Tobacco use is associated with a number of health complaints - including breathing difficulties, coughing, sinus congestion; and with conditions generally associated with ageing - such as osteoporosis, oral health problems, hearing loss, cataracts, impotence and

wrinkles.³¹ Circulatory and respiratory disorders, which are aggravated by smoking, account for a large proportion of illness seen in the older population. In particular, respiratory problems such as asthma, influenza and pneumonia, which can be serious illnesses in the elderly, are more of a risk to smokers³².

Many health problems associated with smoking can cause functional impairment and disability. Older people have a significantly greater risk of being disabled from conditions such as heart disease, chronic obstructive pulmonary disease, malignant neoplasm, cerebrovascular disease and osteoporosis,^{33,34,35} which are exacerbated by smoking. Chest problems are a common cause of severe disability among older adults, with 60% of older adults and 99% of smoking older adults reporting symptoms of cough, wheeze and breathlessness in one study.³⁶ Chronic chest complaints can have a detrimental effect on a person's quality of life, for example by making personal care and housework difficult.³⁷

Smoking also interacts with and impairs the effectiveness of many medications commonly prescribed for illnesses prevalent in older adults – including hypertension, arthritis, diabetes and angina.^{38,39} Smoking is known to aggravate existing health problems and increase the time needed to recover from many illnesses and major surgery.^{40,41}

Cognitive Functioning

There is also some evidence to suggest that smoking speeds up mental decline. Smokers may lose their cognitive abilities, such as remembering, thinking or perceiving, more rapidly than elderly non-smokers. A large multi-centre study of 9209 non-demented older people, suggests that smoking speeds up cognitive decline in the elderly.⁴² A further study of 2820 elderly people in China found that compared with non-smokers, current smokers had an increased risk of Alzheimer's disease and vascular dementia⁴³; this study also demonstrated a dose-response relationship, with heavier smokers at an increased risk compared to lighter smokers. A study on London pensioners revealed that smokers were four times more likely to develop serious mental impairment in old age than non-smokers.⁴⁴

A more recent meta-analysis of 19 prospective studies with at least 12-months of follow-up concluded that, in line with the individual studies above, elderly smokers have increased risks of dementia and cognitive decline,⁴⁵ giving confidence to an assertion that there is a genuine effect at work. Such findings contradict other studies which suggest that nicotine could alleviate symptoms of Alzheimer's and Parkinson's disease.^{46,47}

Biological mechanisms as to why smoking could affect cognitive function are that smoking contributes to hardening of the arteries, atherosclerosis and hypertension, which diminish blood flow to the brain and increase the risk of stroke and small, 'silent' brain infarctions, which may not be clinically

detected.⁴⁸ Almeida *et al.*⁴⁹ describe how smoking is associated with decreased grey matter density in regions of the brain associated with incipient Alzheimer's disease, though further longitudinal studies would be required to examine whether these changes are progressive.

We can have some confidence that tobacco use is associated with increased risk of cognitive dysfunction in older adults, including Alzheimer's disease. However, more investigation is needed into the underlying mechanisms behind these changes.

Pipes and cigars

Recent research confirms that pipe and cigar smoking carry significant risk of smoking related ill-health. When compared to non-smokers, pipe smokers have a greater risk of cancer of the lung, throat, oesophagus, colon and pancreas. They are also at greater risk of other tobacco-related diseases, such as stroke, heart disease and chronic obstructive pulmonary disease.^{50,51}

Henley *et al.*⁵² found that exclusive pipe smokers have an increased risk of the above diseases of around the same magnitude, or slightly higher as cigar smokers, and slightly lower than cigarette smokers (while still being a significantly increased risk).

4.3 The benefits of stopping smoking

Smoking-related illnesses cost the NHS in Scotland an estimated £409 million annually⁵³, with much of this expenditure being used to provide treatment and care for older smokers or ex-smokers. Reducing smoking will lead to health gains that in the long term will reduce smoking related health care costs. Cost-effectiveness calculations suggest that few medical interventions have the potential of smoking cessation to deliver such cost-effective health gains.⁵⁴

Giving up smoking has both immediate and long-term benefits for adults of all ages. Smoking is associated with many common causes of death among older adults, years of illness and disability and increased health costs. Smoking cessation can therefore provide both increased quantity and increased quality of life in older adults, regardless of how long an individual has been smoking.

Reduced mortality

There is increasing evidence to demonstrate that mortality is reduced among those who stop smoking between the ages of 65 and 74. A study in the USA suggested that even for lifetime smokers in their sixties, stopping smoking

increases the chances of survival.⁵⁵ Reports indicate that smokers who give up as late as age 65 gain an average of more than two years of additional life expectancy.⁵⁶

There is also support for the claim that the risks of major diseases common in older people and associated with tobacco use are lessened by stopping smoking. One study suggested that the risk of coronary heart disease for ex-smokers who stay off cigarettes for 5-10 years are the same as for non-smokers.⁵⁷ In addition, the researchers found that stopping smoking reduces the risk of chronic obstructive pulmonary disease and lung cancer. Other studies showed that five years after quitting, a former smokers risk of stroke approaches that of a non-smoker.⁵⁸

Another study found that older smokers who quit have a reduced risk of death from cardiovascular disease within one or two years of quitting, compared with current smokers.⁵⁹ Evidence from this research also suggests that the overall risk of dying of cancer for people who stop smoking approaches that for those who have never smoked, but only after 15 or 20 years of abstinence.

Cessation also appears to have significant benefits even for people who may already have developed smoking related diseases. A systematic review of 20 high quality prospective cohort studies suggests that among patients with coronary heart disease (acute myocardial infraction and angina) stopping smoking reduced total mortality from all causes.⁶⁰

Improved health and well-being

In addition, smoking cessation improves general health and well-being. For older people, stopping smoking can reduce disability caused by chronic illness, protect against loss of physical function and has benefits for conditions including heart disease and stroke.^{61,62}

The benefits of stopping smoking before surgery and radiotherapy have been demonstrated.⁶³ In a Danish randomised controlled trial involving patients who required hip and knee replacement surgery in 6 to 8 weeks, a group of patients were encouraged to stop smoking completely or reduce tobacco consumption by at least 50% before surgery. The frequency of post-operative complications (wound related, cardiovascular and secondary surgery) was 18% in the intervention group compared to 52% in control group. The length of stay was also less for the intervention group, at 11 days, compared to 13 days for the control group. The authors conclude that smoking intervention programmes before surgery are associated with a reduction in postoperative complications.⁶⁴

The consensus of current research leads to the conclusion that smoking cessation has significant impact on both mortality, and quality-of-life related health outcomes for older adults. Cessation itself can have particular

challenges for older adults, which the following section will describe in more detail.

Financial benefits

As is the case with any adult who gives up smoking, the financial savings can be substantial. The savings are particularly pertinent for those above the retirement age as pensioners are more likely to be in the bottom income brackets and less likely to be in the top income bracket than the population as a whole, with single pensioners who live alone having a higher risk of low income than all other groups. In general, the older a pensioner is, the greater the likelihood of low income.⁶⁵

As a typical pack of twenty cigarette in March 2010 costs around £6.28,⁶⁶ a 20-a-day smoker could stand to save around £2,300 per annum through cessation; a considerable saving for someone on low income.

Benefits to others

Exposure to second-hand smoke increases the risks of lung cancer and heart disease in adults⁶⁷ and also increases the risk of a range of problems in children including: middle-ear disease; impaired lung function in childhood and adulthood; respiratory illnesses; asthma attacks; and cot death.⁶⁸

As older adults are likely to be parents, grandparents, or great-grandparents there can be health benefits in smoking cessation for those they may live with, or visit. In the case of residential care homes, where smoking is permitted in Scotland in designated rooms, smoking cessation may result in reduced second-hand smoke exposure to non-smoking cohabiters, visitors and staff.

5. THE CHALLENGES OF STOPPING SMOKING FOR OLDER ADULTS

5.1 General Challenges

From national statistics it has been estimated that 69% of Scottish smokers (of all ages) want to quit.⁶⁹ Smokers of all ages face numerous, well documented, challenges in giving up, including physiological addiction to nicotine,⁷⁰ the difficulties in changing long-standing behavioural associations that accompany the physiological effects, and social pressures.

Studies suggest that older smokers face the same concerns as other smokers when thinking about quitting, including: loss of pleasure; worry about failure, withdrawal symptoms; weight gain; and boredom.^{71 72}

With the increased policy directives emphasising the importance of quality health care for older adults in Scotland, the U.K., and beyond, there are now several studies examining (predominantly qualitatively) the particular, unique, challenges faced when considering cessation amongst this group. Many older adults may have begun to smoke at a time when it was more socially acceptable and less was known about the health risks. They may find it difficult to imagine living without cigarettes or believe that they are already so irreversibly damaged by smoking that quitting would accomplish no purpose.⁷³

Many older smokers have used tobacco for many years, are strongly addicted to nicotine and the habit of smoking. The following sections will detail the implications of these facts, the resultant attitudes and beliefs amongst older adults, and the recommendations of best approaches to cessation that exist in the current literature.

5.2 Attitudes of older adult smokers

Health beliefs

The nursing and midwifery department at Glasgow Caledonian University undertook a qualitative study with older smokers and older former smokers to find out about older people's views on smoking and about information they have been given by health professionals.⁷⁴

Current smokers reported many positive associations with smoking (e.g as a relaxation aid), which often hindered them from trying to stop. Most current smokers were aware that smoking had damaged their health, although some questioned the strength of that association.

A US study⁷⁵ found that older smokers saw smoking as possessing several positive features. The pleasurable qualities of smoking were often linked to relaxation and the relief of boredom.

These themes are further examined in a qualitative study by Kerr and colleagues⁷⁶, through interview with current and former smokers aged 65 and over. As above, many were aware of the damage smoking may have caused, but with a common view that '*the damage was done*', and there was little point in trying to reduce or reverse any health impact. This is a finding consistent with previous work.

Echoing this view is a study on factors influencing older people's health beliefs and health promoting behaviour, which found that many of those over the age of 70, and those who suffered chronic illness, were apathetic about health promoting behaviour. They reasoned that they would soon be dead and did not see the point in depriving themselves of 'treats', which have the impression of making their lives more pleasurable.⁷⁷

Research on 'hardcore' smokers in England, many of whom are over 65, found that this group were particularly resistant to stopping.⁷⁸ Many denied the personal risks of smoking to current or future health, or felt that smoking was their only pleasure in life. As above, older smokers were more likely to feel that it was too late to stop because the damage is done. Furthermore, hardcore smokers often actively defied pressures to quit, with 56% of those surveyed resenting social pressures to give up and 40% believing that their smoking would not influence children.

A further commonly recurring theme is for people to rationalise their smoking through reference to older people who have lived long lives despite being heavy smokers.⁷⁹ Older smokers in general tend to underestimate the risks of smoking and overestimate the benefits.

Studies on attitudes suggest that older smokers are less likely to accept that smoking harms their health or that of others around them than non-smokers or younger smokers. In one study on smoking status and knowledge of the

risks of smoking and benefits of quitting amongst residents of nursing homes in the USA, more non-smokers than smokers stated that smoking negatively affects health and that quitting would lead to health improvements.⁸⁰ Another study with Age Concern volunteers in Wales found that significantly more non-smokers and ex-smokers believed in the harmful effects of smoking than did current smokers.⁸¹

Social context

It is also important to remember that for those who are older smokers today, the social context of smoking at present is often quite different from when they started to smoke. Many older smokers began smoking before the harmful effects were well known, in an era when smoking was widely socially acceptable, considered glamorous, and good for mood and weight control.^{82,83,84} Before the tobacco industry was constrained in the promotion of its product through increased legislation – only really taking effect in recent decades, even health professionals once endorsed the medical and psychological benefits of smoking.

A Scottish study interviewed 22 current smokers between the ages of 65 and 84 years with arterial disease to explore life course changes in smoking-related beliefs and behaviours.⁸⁵ The majority of respondents started smoking between 1930 and 1950 when smoking was commonplace. The social context in which the older adults live now was markedly different from when they started, with all respondents acknowledging that the consensus of public opinion has shifted from social pressures encouraging smoking towards social pressure in support of cessation.

For some respondents in this study, smoking was now a social activity and they linked the level they smoked to the level they socialised. These smokers resisted any societal pressures to quit by maintaining that smoking was primarily a social pursuit. For others, smoking was a solitary activity, particularly for those who had limited social contact or lived alone. Isolation and boredom, caused by the death of partners or significant others, increased some people's level of smoking and reduced motivation to quit.

Although societal attitudes towards smoking have changed markedly since many current smokers started, some research suggests that continued smoking can be seen as a strategy to cope with the unique pressures that manifest in later life; whether that be a link to maintain social contact, or a means to cope with its absence.

However, despite lack of accurate information regarding the health risks when commencing smoking for older adults, Khwaja *et al.*⁸⁶ suggest that there is no evidence that this has an effect on the outcome of quit attempts, giving reasons to be optimistic.

Motives for quitting

In a Scottish study on the views of older smokers and ex-smokers, the main reasons that former smokers stopped were health related.⁸⁷ The high price of tobacco for a pensioner was also mentioned by some research participants. These findings were replicated in a survey from England, which found that health was the main reason for quitting in all age groups, although cost was cited as the second most important reason for giving up in the oldest age group (65 to 74).⁸⁸

In another English study, by the Health Education Authority, prevalence of smoking cessation has been associated with higher levels of education, being highly motivated to quit, being hospitalised at the time of consultation and being married to a non-smoker. Relapse was found to be associated with being aged 65 to 69, heavy smoking and quitting later in life.⁸⁹

A large survey in the USA found that older and younger smokers considered the same three motives for quitting as being the most important: the effect on one's future health, the effect on one's present health and the effect on others. However, all three were rated as significantly less important by older smokers aged 50 and over.⁹⁰

Another study found that among the oldest smokers (over 75s) readiness to quit was related to smoking less than one pack of cigarettes per day, the perception that smoking was addictive and a diagnosis of smoking-related disease.⁹¹ Additional research suggested that smoking cessation increased around diagnosis of heart attack, cancer or stroke.⁹²

5.3 Attitudes of professionals working with older people

In Scottish studies,⁹³ barriers were identified in terms of how much older smokers and ex-smokers were aware of support to enable them to quit, and the extent to which the issue of smoking had been raised with them. Inconsistencies were identified: some participants reporting 'good' levels of support, with others reporting that the issue had never been raised.

A lack of awareness about smoking cessation services and resources is a further reason why older people may be less inclined to try to quit. An American study found that more than a third of smokers aged over 55 had never been advised to stop by their doctor.⁹⁴ Interviews with older adults in the West of Scotland found that most ex-smokers had received little help and support from health professionals when attempting to stop smoking, with a small number of current smokers reporting that they had never been advised to stop smoking.⁹⁵ In general, awareness of specialist smoking cessation services was poor among older adults and there were misapprehensions concerning Nicotine Replacement Therapy (NRT) and its relative harm when compared to continued smoking.

Nurses, care staff, and other health professionals often face a moral dilemma of the appropriateness of advising an older person to give up *'their last remaining pleasure'* and may be reluctant to broach the subject of stopping.⁹⁶

One study with 142 doctors in Ireland found that the advice given to patients by hospital doctors about their smoking is strongly influenced by the patient's health and the patient's chronological age.⁹⁷ Patients with high risk factors for coronary heart disease had the highest probability of being offered advice about their smoking habits, irrespective of age.

Significantly however, doctors were less likely to advise patients over 65 years to quit smoking. Irrespective of the health of the patient, more than 75% of patients aged under 65 years would be offered advice, compared to 64% of those aged between 66-75, 42% of those aged 76-85 and only 30% of those older than 85.⁹⁸ Another Irish study found that patients aged over 65 years were less likely to be prescribed any form of smoking cessation therapy than those under 65.⁹⁹ Most recently, Steinberg *et al.*¹⁰⁰ reported similar findings, with elderly individuals in their sample of 58,000 physician-patient encounters being less likely to receive prescriptions for cessation medications.

A further challenge is that older adults can be vulnerable to depression, associated with isolation, deprivation and changes in life circumstance. Some believe that depressive symptoms are associated with a lower likelihood of stopping smoking and a greater probability of relapse.¹⁰¹ Health professionals holding this view would be unlikely to recommend that depressed older adults try to give up smoking.

Some studies have now recommended that this inconsistency should be addressed by a greater drive for health professionals (at all levels) who come into contact with older smokers to treat smoking as an issue that is both important to raise and possible to address with older adults - given the appropriate training.¹⁰²

In Scotland, initiatives funded by the ASH Scotland Tobacco and Inequalities project^{103,104} demonstrated the need to challenge perceptions and attitudes of some services and staff towards smoking cessation and older adults. Particularly important was to change the attitudes of those who act as 'gatekeepers' in access to older adults (e.g. care home staff), who may not facilitate stop-smoking services' attempts to reach out to older clients as much as would be desirable.

Some research described here presents an encouraging, optimistic view of smoking cessation amongst older adults. Despite the numerous challenges described in the literature, there is a growing sense that something can be done. The following section will describe some of the most recent developments in the field.

6. APPROACHES TO CESSATION WITH OLDER ADULTS

6.1 General approaches

Recommended approaches in Scotland (and to a large extent, the U.K. as a whole) for addressing tobacco use in the wider population include providing information and education on tobacco and cessation; brief advice from medical professionals; specialist behavioural interventions (either one-to-one or in groups) delivered by trained smoking cessation advisors supported by pharmaceutical cessation aids such as Nicotine Replacement Therapy (NRT), Bupropion (Zyban), and Varenicline (Champix).

Current research and practice suggests these evidence-based approaches are as appropriate for older smokers as they are for the general population. There are caveats: clearly some pharmaceutical products may be unsuitable for people who have certain health conditions, some of which may be more common in older adults, or who are taking other medications. Relevant contraindications (from sources like the MHRA: <http://www.mhra.gov.uk>) should be sought before prescribing if this is thought to be the case.

For more detail on current national recommendations on smoking cessation, the reader should look to *A guide to smoking cessation in Scotland* due for publication in May 2010.¹⁰⁵

Although the general model of cessation can be effective for older adults, the literature offers some pointers as to the ways interventions may be tailored to give older adults the best chances of success.

6.2 Tailored approaches

Whitson *et al.*¹⁰⁶ suggest that - from the study of an elderly cohort - some factors which predict successful cessation for their older smokers can be different from those which predict success in younger groups. The suggestion that older adults may have some unique reasons to quit will be used here to see if research can tell us more about what these factors are, and how they should shape the interventions services try to provide.

Accessibility of service delivery

The Health Education Authority in England¹⁰⁷ discusses appropriate ways of providing smoking cessation and education for older adults. In addition to specialist clinics and support groups, self help materials, and telephone support are mentioned as being suitable for older people who may have physical limitations or other factors which prevent them from engaging with routine smoking cessation services.

It has also been suggested that older smokers may be disinclined to enter formal smoking cessation programs, particularly if they have limited experience with the support group format. For this reason one-to-one coaching and telephone support may be particularly effective.¹⁰⁸

Pharmacology

NRT is advocated for older smokers with high nicotine addiction, although gum may not be appropriate for those who wear dentures. The benefits of NRT for reducing physical withdrawal symptoms are reiterated by others. Although caution has been suggested for people with cardiovascular disorders in the past, current clinical recommendations advise that NRT, Bupropion, and Varenicline may be prescribed to individuals with unstable cardiovascular disorders, subject to clinical judgement.¹⁰⁹

Dealing with entrenched views

Attitudes among individuals who deny, or refuse to recognise, the association of smoking with a range of symptoms and diseases have important treatment implications. The authors of a report on 'hardcore' smokers in England, many of whom are over 65, argued that such smokers could be influenced by better targeted health messages to help overcome any 'false sense of security' that they had as a result of smoking for years without noticing any adverse effect on their health.¹¹⁰ Motivational strategies should also be tailored to the unique health beliefs and cultural history of older smokers.¹¹¹

Reduction or complete cessation?

For long-term smokers, as many older smokers are, the notion of suddenly stopping all tobacco use can be intimidating. Leading from this, there has been discussion about the merits of a 'cut down to quit' approach with this group.

Current clinical guidance in the U.K. recommends that 'cutting down to quit', or *nicotine assisted reduction to stop (NARS)* should only be used as part of a properly designed and conducted research study.¹¹²

Prior research,¹¹³ suggested that reducing quantity smoked for older smokers was predictive of success in future quit attempts. The study found that, for their sample of over 2,000 adults, moderate (25-50%) and large (over 50%) reductions in quantity smoked between 1992 and 1994 increased the likelihood of quitting in 1996, compared to no change in quantity smoked.

Cataldo¹¹⁴ however, proposes in a critical summary that decreasing the number of cigarettes smoked should not be a policy endorsed by health professionals when dealing with older smokers. As evidence, Cataldo cites a

cohort study by Tverdal & Bjartviet¹¹⁵ which shows that heavy smokers who cut down their intake by more than 50% are *not* rewarded by a reduction in risk of premature death.

Hence, at present, cutting down to quit is not supported by official cessation guidance for older adults, or any other group, though it is highlighted as an area for further research.

Cessation service promotion

It has been suggested that promotional campaigns targeted to older adults could mention the effects of smoking on other people (e.g. passive smoking) or highlight that older people may, in some circumstances, be role models for younger people (younger people may imitate their behaviour, or may be encouraged to quit if they see that an older person can do it).¹¹⁶ There is a role for specific health education campaigns targeted at older smokers, which informs older adults of the health impact of smoking and stresses the benefits of cessation, with consideration of the factors which older adults are likely to be influenced by.

The role of the health professional

Clinical guidance suggests that health professionals should identify and record the smoking status of all their patients, regardless of age, offering them brief advice, and referral to specialist service.¹¹⁷ At the present time, there is no clinical guidance referring specifically the role of the health professional when advising older adults, but the research below may provide insight and direction.

Andrews *et al.*¹¹⁸ describe why there is a case for tobacco dependence in older adults to be treated with the same status as other chronic diseases, such as diabetes and hypertension and suggest that gerontological nurses have a key role to play in any interventions. Lester & Kohen¹¹⁹ describe the case study of a nursing home resident with dementia who sustains accidental second- and third-degree burns, and the issues smoking and smoking cessation can raise for wider policy in residential care.

Nurses in general can make a significant contribution to the health of older people. Nurses in both primary services and acute hospital care have the opportunity to provide information and advice on smoking to older adults and their families. Appropriate support and encouragement from staff in nursing homes may also increase the likelihood of a successful quit attempt among residents.¹²⁰

Doctors also have an important role to play in educating older adult smokers and encouraging them to stop smoking or to change their pattern of tobacco

use. Given that 90% of all contact between patients and the NHS takes place in primary care, and that people aged over 65 are known to have the most frequent contact with the health services,¹²¹ GPs (General Practitioners) along with other members of the primary care team, have an especially important role to play.

Hospital consultants, especially those working with diseases strongly associated with smoking, such as cancer, respiratory illnesses, and heart disease, also have a part to play in raising smoking with older patients.

Research from the USA confirms the need for greater involvement of doctors in smoking cessation interventions for the elderly. One American study urges physicians to play a greater role in discussing smoking with their patients and advocating smoking cessation.¹²² Another US study tested the effectiveness of an office-based, physician-delivered smoking cessation programme, tailored to midlife and older smokers (50-74), and found that abstinence was significantly increased by training physicians and key clinical staff to intervene with older smokers.¹²³ The authors concluded that brief interventions by doctors with this age group can, and should, be successfully integrated into routine care.

Brown *et al.*¹²⁴ examine data from nearly 800 current smoker admissions for older adults hospitalised with acute myocardial infarction, and concluded that inpatient smoking cessation advice has a significant impact on subsequent mortality. Studies of this nature add weight to the argument that smoking cessation advice should be provided as a matter of course when individuals come into contact with the health services, particularly relevant when patients present with a strongly smoking-related condition, even more so when they are elderly.

Specific training is needed for health professionals to help them provide information and encouragement about stopping smoking to all clients, regardless of their age, and to address the specific needs of older smokers as discussed by Kerr *et al.*¹²⁵ The same researchers¹²⁶ take this work further by devising tailored training in smoking cessation for primary care team members who work with older people, and subsequently testing its impact on knowledge, attitudes, and practices of training participants. The training was found to be effective in demonstrating a positive impact on the measured variables – the first investigation of its type, giving encouragement for future research and change in practice amongst health professionals.

Further resources

ASH Scotland's Tobacco and Inequalities project and PATH have funded and coordinated project work in Scotland over the last six years on range of issues around tobacco and smoking cessation with older adults, with full reports and other documents available on the ASH Scotland website¹²⁷ including:

- **School of Nursing and Midwifery & Community Health at Glasgow Caledonian University:** Developed and evaluated tobacco training for healthcare professionals who work with older adults.
- **Stop-smoking service, Health Promotion, NHS Orkney:** Carried out a needs assessment into stop-smoking support for older adults, provided in the home.
- **Coal Industry Social Welfare Organisation (CISWO):** CISWO supported and developed networks with existing stop-smoking teams and health promotion agencies to deliver advice to smokers in traditional coalfield communities in central Scotland.
- **Lightburn Elderly Association Project (LEAP):** Aimed to deliver an accessible, informal pre- and post-quit service throughout LEAP's programme of activities in the Cambuslang area.
- **Stirling Health & Well Being Alliance:** Delivered an intensive, community-based smoking cessation programme for older adults.
- **West Lothian Drug and Alcohol Service in partnership with NHS Lothian:** Aimed to establish a community-focussed service for smokers aged 50 and over through individual or group support.
- **Braveheart:** Based in Falkirk and developed resources for the provision of targeted training, information sessions and support groups for older adult smokers who have suffered cardiac events.
- **Health promotion department, NHS Borders:** Conducted a needs assessment to establish the needs regarding tobacco awareness amongst people aged 65 and over and their carers.
- **Glasgow Caledonian University:** Carried out research funded by PATH in 2004 to inform the development of the training later prepared by the School of Nursing and Midwifery & Community Health, above.

7. CONCLUSIONS

This review has described the extent and health impact of tobacco use amongst older adults in Scotland; the benefits obtained and the challenges involved in quitting; and recent research investigating what we know about the best ways to help older adults quit.

Tobacco's health impact remains on a significant scale for older adults in Scotland, and the challenges involved in cessation are numerous (both those shared with the general population and those unique to older adults). However, the evidence base also shows that the benefits obtained can be substantial, and the research, though still very much emergent, shows encouraging developments.

Many older adults smoke, but as of yet, they are still not offered sufficient advice or support to enable them to stop, and are still at somewhat of a disadvantage when compared the general population. By contrast, given the repeated confirmation of the benefits of cessation of tobacco use in later life, they should be prioritised to a greater extent.

Work carried out through projects and initiatives in Scotland has shown that smoking is not always seen as a priority with older adults by the services they rely on, highlighting the need to find new approaches in how to raise the issue; both with older smokers and the professionals they come into contact with. Professionals such as carers can be influential in increasing older adults' quality of life through promotion of smoking cessation, emphasising the likelihood of improved health so older adults can spend more time enjoying their retirement with more money in their pocket.

Health professionals and services wishing to assist older smokers to quit should be aware of the reasons why people start smoking, the nature of nicotine addiction, and the challenges of quitting. For older adults in particular, they should be aware of specific issues they may be facing such as heavy nicotine dependence and habituation to smoking, and smoking as a way of coping with boredom, stress or isolation. There are also medical issues relating to older smokers who require surgery or treatment for specific illnesses. However, it is important not to make assumptions about the needs of older adults or adopt a 'one size fits all' approach.

Contact with the health services continues to provide excellent opportunities for smoking cessation interventions; there is compelling evidence that such interventions can be effective in triggering and supporting attempts to quit. Efforts to expand encouraging recent findings in what works for cessation amongst older adults, and training in cessation for healthcare professional staff (particularly those who frequently come into contact with older adults) should be encouraged.

8. APPENDIX - OLDER ADULTS IN SCOTLAND

8.1 Defining 'older people'

The question of how 'older people' are defined and identified is an interesting one; predictably with no single answer. There is no legal definition of old age with several characterisations being used by different people in different contexts. These are, unsurprisingly, often based on chronological age, but also in relation to stage in the life-cycle and relationship to the labour market. This review uses several different definitions, dependent on the usage in original sources. Researchers have categorised older adults differently depending on local convention or convenience in data gathering– it would make little sense to exclude potentially informative research in order to adhere to a predefined age range.

In a global health promotion context, the World Health Organization defines older people as those aged over the age of 50 (www.who.int/healthinfo/survey/ageingdefnolder/en/index.html), while acknowledging that the United Nations identifies it as people aged 60 years and older. In a European framework, older people are defined in relation to receipt of the retirement pension at the age of 65. In the U.K., as with many other post-industrial nations, the conventional definition of older people is also age 65, the state pension age for men. However, age 60 is sometimes also used, as this is current pensionable age for women (although this is set to rise gradually for women from 2010 onwards with the aim of equalising the age of retirement for both sexes). Further changes are planned in the U.K. from 2024, with a stepped approach to bring the pensionable age up to 68 for everyone born after the 5th April 1958. More details on these changes are available at: www.thepensionservice.gov.uk/age-changes/

Growing older is of course a natural process and not a pathological state. As such chronological age is not always useful as an indication of someone's physical health or mental state – as common perception will tell us, there are 50-year olds who seem old, whilst there are 70-year olds who will seem young.

Older people, by whatever definition used, are not a homogenous group. Their interests, needs and wishes vary as widely as those of the general population. The category 'over 65s' spans generations and includes an age range of over 40 years. Factors such as age, gender, social class, income, ethnicity and health status impact upon an individual's way of life and their service needs.

In discussions on older people, the category is often divided into different sub-groups, such as 'young old' – up to 75 years and 'old old' – over 85.¹²⁸ The terms 'third age' – when people no longer have work or child-rearing

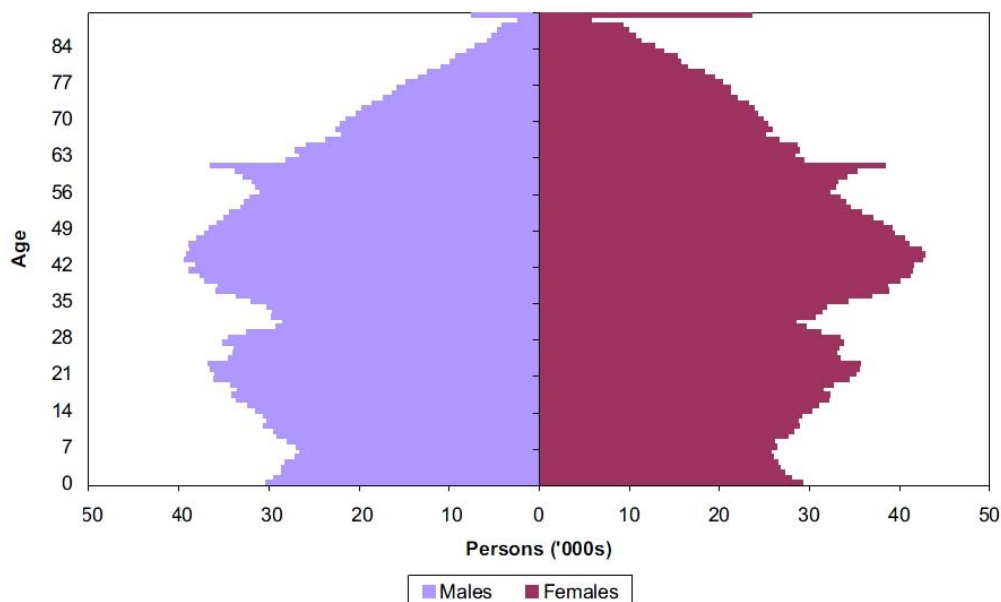
responsibilities, and are still relatively fit and active; and ‘fourth age’ – when people become increasingly frail and dependent on services are also used.

8.2 The size of the older population

Scotland’s population has been on the rise for five years running, with more people living in Scotland now at any time since 1981.¹²⁹ The number of older people has grown in both absolute and relative terms throughout the 20th century. This is in part due to increased life expectancy, with more people living longer, and a net increase in migration. Life expectancy has increased from 69.1 years for men and 75.4 years for women born around 1981 to 75.0 years and 79.9 years respectively for those born around 2007 (although life expectancy varies in different parts of Scotland – with a clear trend of shorter lifespans in more deprived areas). The increasing size of the older population is also due to the ageing of the large post-war ‘baby boom’ generation – the cohort born in the 1950s and 1960s.

Population pyramids show the changing composition of Scotland’s population over the last century. The current estimated composition of Scotland’s population is shown below.

Figure 3: Scotland’s estimated population by age and sex (June 2008)

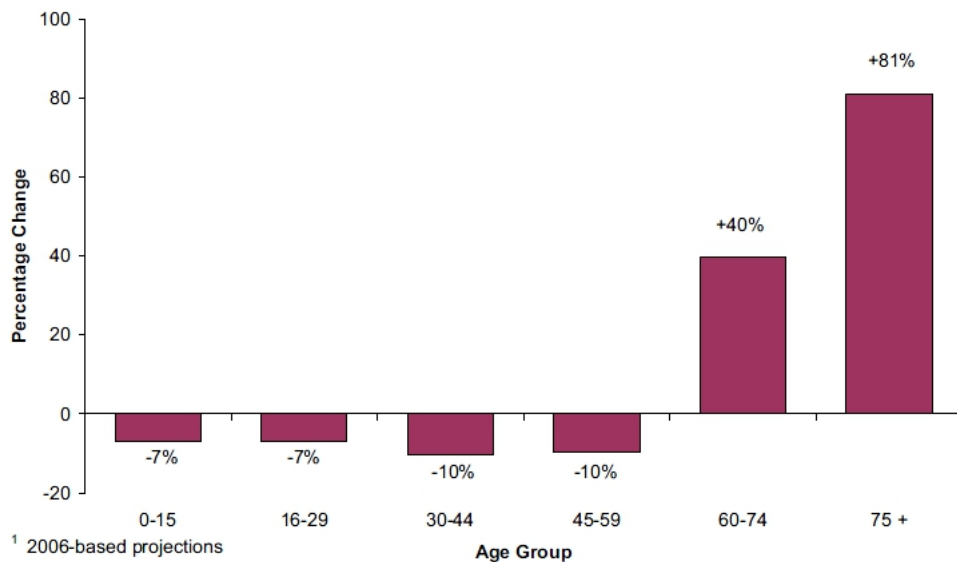


Source: Graph reproduced from the Registrar General’s Annual Review of Demographic Trends 2008. © Crown copyright 2008.

Amongst older people, particularly over the age of 75, the increased ratio of women in this group stems partly from male mortality due to the Second World War. The large peak at 60, and the bulges between 35-45 are thought to be a result of the baby boom, following the two wars.

The total population of Scotland recorded at the 2001 census was just over 5 million (5,062,011). At this time there were 804,900 people aged over 65 in Scotland, representing nearly 16% of the population. Until the next census in 2011, the most reliable estimates and projections of Scotland's population comes from the Registrar General's Annual Reports. Below, taken from the 2008 Registrar General's report, is a projection of how Scotland's population is predicted to age from 2006 till 2031.

Figure 4: Projected % change in age structure of Scotland's population 2006- 2031¹



Source: Graph reproduced from the Registrar General's Annual Review of Demographic Trends 2008. © Crown copyright 2008.

Estimates from the report show that while the number of children under 16 is expected to decrease by 7% (from 0.92 to 0.86 million), the number of people aged 60 or over is expected to rise by 54% (from 1.12 to 1.72 million). Although Scotland is not alone in having an ageing population (this situation is shared with many countries in Europe), the reality is that an aging population will have significant impacts for public health that must be planned for.

8.3 The older population in different regions

The most recent 2001 Census data can be broken down into different geographic areas (e.g. Scottish Parliamentary Constituency, Scottish Parliamentary Region, Local Council Area, Health Board Area, Census Area Sector and Census Area Ward). Breaking the Census data down into regions gives information about the numbers of older adults in different parts of the country.

For this analysis the 2001 Census data was analysed for each of the fifteen NHS Scotland Health Board Areas that existed at the time of the survey. *(On 1st April 2006, NHS Argyll and Clyde was merged with two other health boards: NHS Highland and NHS Greater Glasgow – this amalgamation becoming NHS Greater Glasgow and Clyde. Unfortunately, no more recent national census data is available at time of writing that reflects this change)*

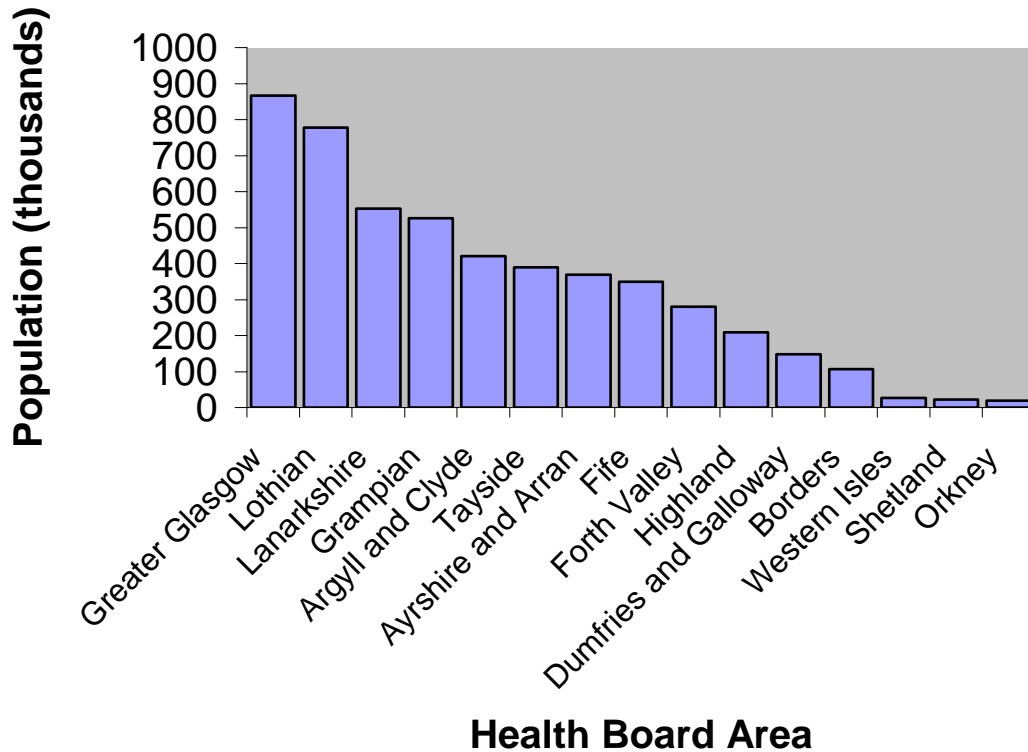
These delineations are used for the purposes of health service provision and funding. Furthermore, smoking cessation services and other community based health initiatives often operate at Health Board level.

Figure 5, over, shows the overall population in each of the Health Board Areas. The most populous areas are Greater Glasgow (now Greater Glasgow and Clyde) and Lothian Health Boards, which serve the populations of Scotland's two largest cities – Glasgow and Edinburgh. Both Health Board areas have populations of over 700,000 people.

The next most populous areas are Lanarkshire and Grampian, with around 520,000 and 550,000 residents. Grampian is home to Scotland's third largest city, Aberdeen, while Lanarkshire encompasses many central belt towns and parts of the Greater Glasgow conurbation. The next five Health Board Areas (the now dissolved Argyll and Clyde, Tayside, Ayrshire and Arran, Fife and Forth Valley) have between 420,000 and 270,000 residents. Again these are all areas in South Central Scotland which contain many large and small towns.

The following three Health Board Areas (Highland, Dumfries and Galloway and Borders) have between 210,000 and 100,000 people at the time of the census, representing more sparsely populated towns and rural areas in the north and south of mainland Scotland. The remaining areas – the island Health Boards - (Western Isles, Shetland and Orkney) have less than 27,000 inhabitants.

Figure 5: Population by Health Board Area, as of the 2001 census



Source: Data from 2001 Census, (table S201) General Register Office for Scotland

Figure 6, over, shows the number of adults aged over 65 in the different Health Board Areas.

Unsurprisingly, the Health Board Areas that take in Scotland's largest cities and have the larger total populations - Greater Glasgow and Lothian - have the highest absolute numbers of older adults (with between 115,000 and 136,900 adults aged over 65). Other areas with sizeable numbers of older adults are those with Scotland's other main cities (Aberdeen and Dundee), larger towns and urban sprawls in the central belt. Smaller older populations are found in the more rural regions of Scotland, around the Borders, the Highlands and Islands.

Figure 6: Over 65 year olds by Health Board Area at 2001 Census

Area (Health Board) (all ages)	Total population (all ages)	Absolute size of population over 65 (total)	Relative size of population over 65 (% of total)
Scotland	5062011	804900	15.9
Greater Glasgow	867150	136901	15.8
Lothian	778367	115012	14.8
Lanarkshire	552819	79262	14.3
Grampian	525936	78907	15.0
Argyll and Clyde	420491	67682	16.1
Tayside	389012	70357	18.1
Ayrshire and Arran	368149	62620	17.0
Fife	349429	56740	16.2
Forth Valley	279480	42714	15.3
Highland	208914	34675	16.6
Dumfries and Galloway	147765	28331	19.2
Borders	106764	20149	18.9
Western Isles	26502	5245	19.8
Shetland	21988	3085	14.0
Orkney	19245	3220	16.7

Source: Data from 2001 Census, (table UV04) General Register Office for Scotland

However, in *relative terms*, as given in the rightmost column of the above table, higher percentages of older people are found in some of the more rural areas. The proportion of the population aged over 65 in Scotland overall is 15.9%. In the four most populous areas the percentages of old age pensioners are actually below the Scottish average. In contrast, in three less populated, more rural areas - Dumfries and Galloway, Borders and the Western Isles - around 19% of the population are aged 65 or over.

These results are echoed for populations of 'older' older adults – aged over 75 and over 85. As shown in figure 7 over, on average 7.1% of the population are aged over 75, and 1.7% aged over 85. However, in certain areas (the same predominantly rural areas as described above) the percentages of people in these age groups are higher than the national average. In short, populations are ageing more rapidly in Scotland's rural areas.

Figure 7: Over 75s and Over 85s by Health Board Area at 2001 Census

Area (Health Board)	Total population (all ages)	Absolute size of population over 75 (total)	Relative size of population over 75 (% of total)	Absolute size of population over 85 (total)	Relative size of population over 85 (% of total)
Scotland	5062011	358867	7.1	88355	1.7
Greater Glasgow	867150	60599	7.0	14709	1.7
Lothian	778367	52678	6.8	13283	1.7
Lanarkshire	552819	32687	5.9	7244	1.3
Grampian	525936	35439	6.7	8980	1.7
Argyll and Clyde	420491	29518	7.0	7265	1.7
Tayside	389012	32278	8.3	8291	2.1
Ayrshire and Arran	368149	27925	7.6	6796	1.8
Fife	349429	26082	7.5	6395	1.8
Forth Valley	279480	18937	6.8	4551	1.6
Highland	208914	15244	7.3	3861	1.8
Dumfries and Galloway	147765	12501	8.5	3027	2.0
Borders	106764	9460	8.9	2444	2.3
Shetland	21988	1476	6.7	393	1.8
Western Isles	26502	2550	9.6	711	2.7
Orkney	19245	1493	7.8	405	2.1

Source: Data from 2001 Census, (table UV04) General Register Office for Scotland

There are many possible reasons for this trend. One reason is there are typically less young people in rural areas, skewing the figures towards a greater relative proportion of older people. This could be because young people tend to move out of rural areas for employment or education, and also because older people tend to move into more rural areas in retirement. Another possibility is that people in rural areas might live longer than those living in urban areas.

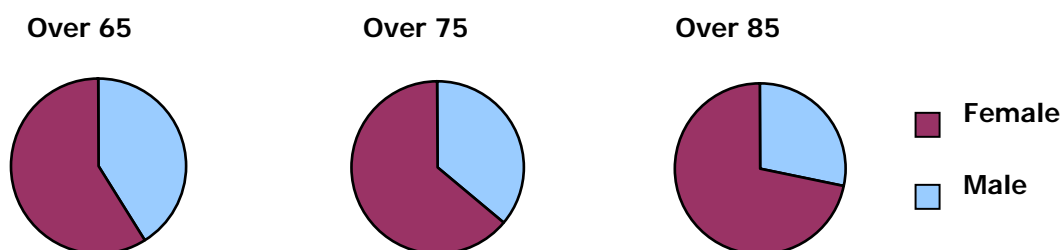
8.4 Socio-economic and demographic profiles

In addition to age, a person's sex, social class, occupation, income, education, housing tenure, family and social networks, ethnicity and religion are among the factors that influence lifestyle and behaviours, including tobacco usage, health status and uptake of services. There are also geographic differences across Scotland in the provision and utilisation of health and social services for older people. Health inequalities are a clear and important consideration for all health and social care service providers.

Gender and age

In Scotland, as in other Western countries, women tend to live longer than men. The larger numbers of older women compared to men is represented in the pie charts below (figure 8). Two trends are evident: there are more women over the age of 65 than men and proportionately larger numbers of women survive into older old age than their male counterparts.

Figure 8: Ratio of men to women in older adults, from 2001 census



Source: Data from 2001 Census, (table CAS004) General Register Office for Scotland

Such trends should be borne in mind by professionals aiming to provide tobacco strategies targeted at older adults. Different approaches may be appropriate for men and for women, or for adults of different ages.

Socio-economic status

Deprivation is strongly associated with health inequalities, and has been well documented as a research and policy focus. Occupational classifications are used as proxy measurements for socio-economic status to assess levels of relative deprivation within a given population. A person's employment status can have a bearing on their social and material environment, lifestyle and health behaviours.

Because measures of socio-economic class are often based on current employment status, it can be difficult to measure socio-economic status for adults of retirement age by conventional means. Most recent, or most significant former occupation is sometimes used as a proxy for social class, although there are shortcomings of this approach - a person may have changed jobs several times in their lifetime. Further problems occur as historically women have been assigned according to their husband or father's occupation, not their own. Perhaps most significantly, former occupation is not always an adequate indicator of a person's social and material circumstances in later life.

As described previously, the average income of pensioner households is lower than the general population. People of pensionable age receive over half of their income from benefits, principally Retirement Pension or other National Insurance payments.¹³⁰ Overall, the ability of pensioners to save money is relatively low. As a consequence of their reliance on benefits the majority of pensioners have relatively lower incomes.

Nonetheless, many adults over 60 continue to pursue employment of some kind; those working with older adults should therefore not assume that they are all economically inactive.

Housing tenure is another indicator of socio-economic status. As with employment, the social and material environment in which a person lives may have a bearing on their lifestyle, behaviours and health status. Among older adults, the pattern of housing tenure differs from the general population. A high proportion of pensioners are outright owners of their homes and significant numbers are also public sector tenants.¹³¹

Another distinct feature of housing among older adults are those that live in residential care, including nursing homes, sheltered housing or in hospital. At the time of the 2001 Census nearly 38,000 people aged over 65 were living in communal establishments. Many pensioners, especially women, also live alone. Figure 9, over shows some key features of old people's residence.

Figure 9: Residential status of adults aged over 65 in Scotland at 2001 Census

Residential Status	Number of households
Men aged over 65 living alone	75,322
Women aged over 65 living alone	25,3126
2 or more people aged over 65 living together	18,6244
People aged over 65 living with non pensioner(s)	16,9629

Source: Data from 2001 Census, (tables T38) General Register Office for Scotland

Just over half (52%) of all households with adults aged over 65 are made up of a pensioner living with one or more other person(s). The remainder (48%) are households of people aged over 65 who live alone.

Health and use of services

Rates of long-standing illness and disability increase with age, hence older people tend to have a much greater need for health and social services than the young. In England and Wales almost two thirds of general and acute hospital beds are used by people over 65 and the NHS spends about 40% of its budget on people of pensionable age.¹³² Figures from Scotland show that older adults north of the border also make significant use of health services. Each year NHS Scotland provides the following services for over 65s:¹³³

- 3,769,000 GP consultations
- 287,000 new outpatient referrals
- 206,000 day cases and elective (non-emergency) inpatient admissions
- 185,000 emergency inpatient admissions

In terms of formal and long term care provision for older people, in Scotland there are approximately:¹³⁴

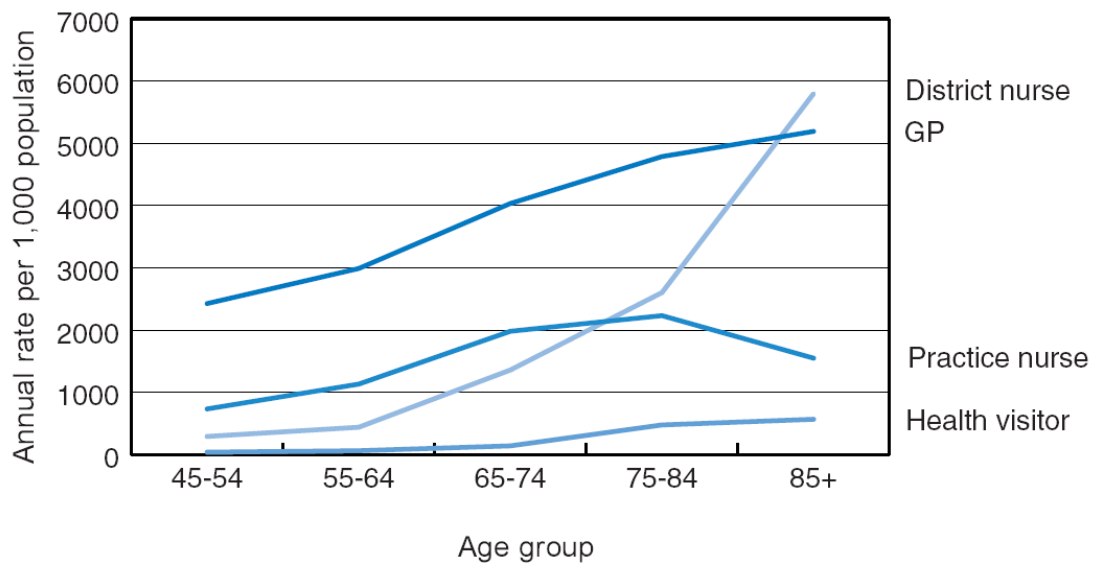
- 59,000 older people receiving home care
- 12,000 people attending a day centre for older people
- 14,000 people in a residential home for older people
- 18,000 people in a nursing home
- 3,800 people in an NHS Scotland geriatric long stay facility.

Older people's use of primary care services are shown in Figures 10a and 10b, over. For both males and females the overall rate of consultations with primary care teams tends to rise with age. In particular consultations with GPs are high for both sexes. For men these rise steadily throughout old age, from

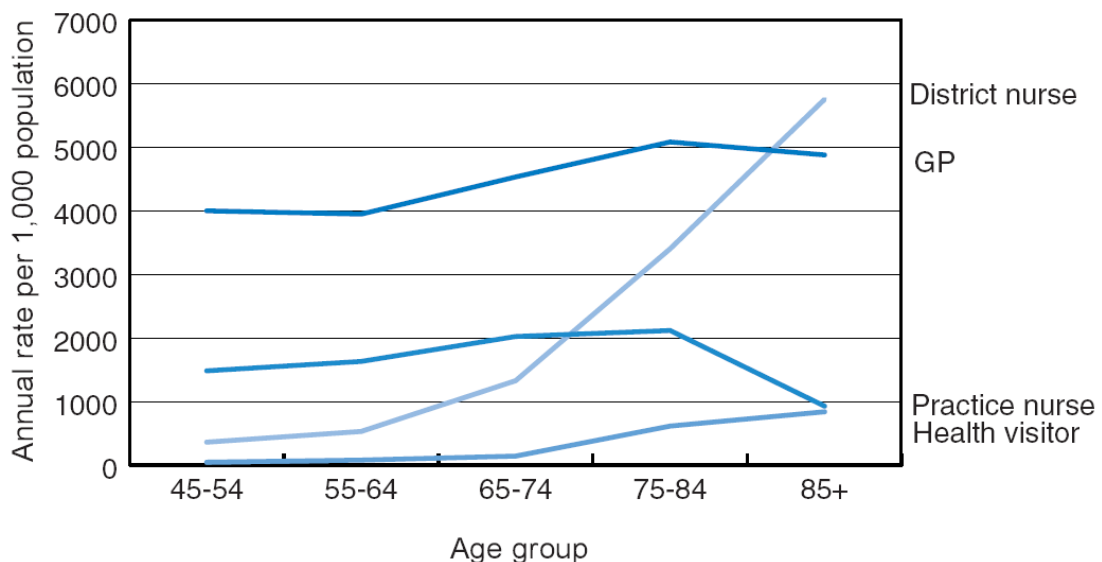
approximately 2500 consultations per 1000 men aged 45-54 per year, to just over 5000 consultations per 1000 men aged over 85. For women the base level is higher, at 4000 consultations per 1000 women aged 45-65, rising to a peak of 5000 consultations for 1000 women aged 75-84, and falling slightly in women older than 85.

Figure 10a & 10b: Older peoples' consultation rates with primary care health professionals

10a Male consultation rates 2000/01



10b Female consultation rates 2000/01



Source: NHS ISD (2001) *The Health and Well-being of older people in Scotland*. CMR dataset ISD.

This reinforces the findings of a study by Age Concern which found that 94% of older people questioned had visited their GP in the past five years.¹³⁵ In England people aged over 65 are known to have contact with members of the primary care team on average seven times per year, with consultation rates higher for smokers.¹³⁶

For both sexes, levels of consultation with district nurses are significant in older age. Rates of consultations with district nurses tend to be low in the under-60s, but begin to rise dramatically between the ages of 65-74. At age over 85 there are larger rates for consultation with district nurses per 1000 of the population than there are with GPs – at just under 6000. Consultations with health visitors also rise after the age of about 70, but remain under 1000 per year per 1000 people.

8.5 Summary

The above demographic and socio-economic factors are significant in terms of a person's propensity to use tobacco, and/or access services.

An understanding of the age structure of a local population, the concentration (or dispersal) of older adults and socio-economic features of the community are useful pieces of information for those involved in planning, developing and providing services. Professionals wishing to provide appropriate smoking cessation and tobacco education initiatives should be encouraged to create detailed profiles of older adults living in their area in order to inform appropriate approaches to tobacco education and smoking cessation.

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