

USES OF EPIDEMIOLOGY: HEALTHY LIVING

Defining a minimum income for healthy living (MIHL): older age, England

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Background Worldwide biomedical and social research is providing evidence on the personal requirements for health and well-being. Assessment of the minimum personal costs entailed in meeting these requirements is important for the definition of 'poverty'. Barriers to health must arise if income is below this level. We demonstrate the principle of such assessment for people aged 65 years plus without significant disability living independently in England.

Methods Current best evidence on the needs for healthy living was derived for nutrition, physical activity, housing, psychosocial relations/social inclusion, getting about, medical care and hygiene. We used conclusions of expert reviews, published research and where necessary, our judgement. This knowledge was translated into presumptively acceptable ways of living for the specified population. Current corresponding minimal personal costs were assessed from familiar low cost retailers/suppliers or, where unavoidable, from national data on the expenditure of low-income older people.

Results Minimum income requirements for healthy living, MIHL, for this population in England is 50% greater than the state pension. It is also appreciably greater than the official minimum income safety floor (after means testing), the Pension Credit Guarantee; that will also have to meet any extra costs of disability.

Conclusion Objective evidence-based assessment of MIHL now is practicable but not presently as a basis of health and social policy in the UK or elsewhere apparently. Such assessment could also be an operational criterion of poverty and society's minimum income standards. The results suggest that inadequate income currently could be a barrier to healthy living for older people in England.

Keywords Health, income, costs of living, elderly, evidence-based Public Health, public policy, poverty, epidemiology

Introduction

Worldwide biomedical and social research is establishing essential personal requirements for health and well-being in key areas of human need.^{1–4} It is the responsibility of Public Health and the health community in general to seek to apply this knowledge across the whole population.

To date, there has been little attempt to assemble in a systematic way the current best evidence on health needs and

the minimal costs entailed in meeting them for specified population groups. Such evidence would have obvious importance for public policy, including its relation to health inequalities, because an income below this minimal healthy level must be a barrier to the attainment of health. We have therefore proposed that the concept of minimum income for healthy living (MIHL), based on the application of research evidence, can be used as a benchmark in public policy and for setting national standards in social provision.

We have previously reported on the MIHL for young men living in England in relation to the new national minimum wage.⁵ In the present report, we describe the application of the MIHL concept to define the minimum income needs in England for people aged 65 years and over. Focus on this age is

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particularly necessary given the loss of health, well-being and independence from inadequate income as described, for example, in the Acheson report.⁶

Methods

Our focus was people aged 65 and above, living independently (i.e. in non-assisted housing), retired from paid employment and without significant defined disability (Table 1). The ~40% in this age-group with such disability are likely to have extra personal costs that require further *ad hoc* study, and therefore were not included.

We first derived a statement of the needs for healthy living of the defined population in everyday terms. To do so, we drew on our experience in each of the areas of assessment, assembling conclusions from international and national expert review committees, published topic reviews, the results of randomized controlled trials and other research evidence. Where such detailed objective evidence was lacking, we made pragmatic

judgements that we believed would have the support of the informed health community.

Next, this was assembled and translated into ways of living that we considered would be acceptable to the contemporary older age population of England.

Third, we estimated minimum but realistic costs—hence disposable income—required to meet these ways of living, using two methods. For most items we made enquiries into representative prices from familiar low cost retailers/suppliers. Where we were unable to define a cost in this way (as described in the Results subsequently) we used data from national surveys on the actual weekly expenditure by households in the lowest 40% of incomes, where the head of household was aged 65+ years. Many such costs were derived from the national Expenditure and Food Surveys (EFS), 2002–04.⁷ Allowance was made for *ad hoc* social provisions for older people currently in England, notably the television licence, local public transport, Local Authority recreational facilities and national museums and galleries.

Table 1 Health survey for England 2000 and 2001: assessment of significant disability in private households, by age

Dimensions of disability	Age groups (years)			
	65–74 %	75/84 %	85+ %	All %
Locomotion^a				
No locomotor disability	76	61	36	67
Moderate disability	18	25	35	22
Severe disability	6	14	29	11
Personal care^b				
No personal care disability	88	83	69	84
Moderate disability	10	14	25	12
Severe disability	3	3	6	3
Hearing				
No hearing disability	89	86	71	87
Moderate disability	10	12	23	12
Severe disability	1	2	6	1
Seeing				
No sight disability	96	92	80	93
Moderate disability	3	5	10	4
Severe disability	1	3	10	2
Communication				
No Communication disability	99	97	94	98
Moderate disability	1	2	4	2
Severe disability	<1	1	2	1
Overall presence of significant disability %				
None	67	52	27	58
Moderate	24	31	34	27
Severe	9	17	39	14

^a'Significant' moderate locomotor disability—e.g. some difficulty walking 200 m; going up and down 12 stairs without resting.

^b'Significant' moderate personal care disability—e.g. some difficulty getting in/out of bed; using toilet on own.

Source: Re-analysis of HSE2000 and HSE2001 data, Hirani V, Malbu K, using our age categories.

Results

Diet and nutrition

Drawing on the extensive evidence on nutritional needs in older age,^{8,9} we devised an example weekly diet using standard foods likely to be well accepted by most older people living in England. The diet (Table 2) was specified to meet:

- daily energy requirements [10.3 MJ (2450 kcal) for a man, 8.8 MJ (2100 kcal) for a woman] for a moderately active person aged 75–84 years^{10,11} (the mid-age range of our study)
- basic nutrient requirements (when averaged over 7 days),^{8,9,12} with vitamin B12 (2.5 µg/day) provided in supplement form (Table 2)⁸
- internationally accepted dietary recommendations such as those for fruit and vegetables and oily fish, and food-based dietary guidelines.⁸

Half the diet was priced at a leading lower-price UK supermarket selecting own-label low-cost products where available, the other half at customarily more expensive local shops.⁵ We then allowed a further 10% for wastage.¹³

The estimated weekly average cost was £31.40 for moderately active single women, £33.20 for moderately active single men and £63.70 for a moderately active couple.

Physical activity

Extensive evidence^{14–19} on the health benefits of physical activity in older age led us to emphasize the activities in daily living and in addition to recommend: (i) dynamic aerobic exercise, walking par excellence, for heart and lung and general fitness, (ii) activity against some resistance for building local muscle mass and strength and (iii) stretching and bending with such specialties as walking on the toes and strengthening the ankles for balance and stability. Currently most of the older population in England does not take enough exercise.¹⁵

To meet this advice, in our costings we allowed for one weekly Local Authority specialized group exercise or swimming session (which are very popular) or solo swim (weekly cost £1.50 for singles, £3.00 for a couple), together with the costs of a walking stick and the modest kit expenses needed for a regular regimen of walking, swimming and similar exercise, £0.60/week for singles, £1.10/week for a couple. The costs of extra calories and for laundry were covered under the appropriate headings.

Housing

The specification and costing of a 'healthy home' was particularly complex. A healthy home needs to have sound structure, to be free of hazards, to provide adequate facilities for sleeping, personal hygiene, the preparation and storage of food, an environment for comfortable relaxation, for privacy and tranquility and facilities for social exchange with friends, family and others.^{20,21} In the dearth of epidemiological data, we were unable to translate many of these requirements into specific

Table 2 Average daily nutrient composition of our healthy diet compared to international [WHO/TUFTS⁸] and national (UK Department of Health⁹) recommendations and Safe Upper Levels (SUL¹²) of intake

	Moderately active men	Moderately active women	WHO/TUFTS ⁸	DoH ⁹	SUL ¹²
Energy (kcal)	2439.0	2085.0	2059–2648	2100	
Protein (g)	105.8	90.3	65.6–80.2	53.3	
Englyst fibre (g)	27.6	24.1			
Sodium (mg) ^a	3330.0	2760.0		1600	
Potassium (mg)	4706.0	4221.0		3500	
Calcium (mg)	1052.0	904.0	800–1200	700	
Magnesium (mg)	505.0	438.0	225–280	300	
Phosphorus (mg)	1931.0	1667.0		550	
Iron (mg)	23.6	20.3	10	8.7	
Copper (mg)	2.0	1.7	1.3–1.5	1.2	10.0
Zinc (mg)	13.2	11.3	7	9.5	25.0
Selenium (µg)	112.0	85.0	50–70	75	450.0
Iodine (µg)	137.0	130.0		140	
Vitamin A (µg) RE	996.0	975.0	600–700	700	
Vitamin C (mg)	193.0	190.0	60–100	40	
Vitamin D (µg)	11.6	9.8	10.0–15.0	10	
Vitamin E (mg)	6.5	6.1	4.3–17.2	4	34.5
Thiamin (mg)	2.4	2.1		0.9	
Riboflavin (mg)	2.4	2.1	1.3	1.3	
Niacin equivalents (mg)	56.0	47.3		16	
Vitamin B6 (mg)	3.3	2.9		1.4	10.0
Vitamin B12 (µg)	12.1 ^b	9.3 ^b	2.5 ^c	1.5	
Total folate (µg)	454.0	406.0	400	200	
Pantothenic acid (mg)	5.9	5.4		3.0–7.0	
Biotin (µg)	50.3	46.6		10–200	
Alcohol (g)	11.9	11.9			
Percentage of energy from:					
Protein%	17.3	17.4			
Total fat%	29.5	29.4	30%	33%	
Saturates%	8.5	8.2	8%	10%	
Monounsaturates%	11.0	11.1			
Polyunsaturates%	6.8	6.9			
Carbohydrate%	49.3	49.1		47%	
Sugars%	23.7	23.8			
Starch%	25.7	25.3			
Alcohol%	3.9	4.0			

^aThe sodium intake is higher than recommended but would be reduced by up to 37% with the provision of low-salt (but high-cost) bread and breakfast cereal.

^bNot including intake from B₁₂ supplement.

^cAs supplement.

Table 3 Housing costs

	Cost (£s) per week	
	Single	Couple
Water supply and miscellaneous services relating to the dwelling	6.21	6.26
Fuel costs for heating and cooking	13.75	13.75
Insurance (dwelling structural and contents)	2.65	3.54
Service contract for maintenance, breakdown and emergency repairs of heating system, etc.	6.97	6.97
Basic repair costs to make dwelling fit for habitation	3.51	3.51
Repairs and maintenance of dwelling fabric	3.46	5.45
Total	36.55	39.48

costs, and instead used average housing expenditure (figures from the 2002–04 EFS).⁷ We included insurance and water service charges (for which rebates cannot normally be claimed²²), but did not include council tax, rent and mortgage payments, the costs of which are claimable after further means-testing by those on the Pension Credit Guarantee). To these we added two specific items which have direct bearing on health:

- (i) Fuel use, specifically the cost of heating a home to the standard heating regimen,²³ which we regarded as the minimum to protect against winter/cold-related morbidity and mortality.^{24,25} These costs were obtained from the 2001 English House Condition Survey²⁶ for dwellings in the lowest quartile of the income distribution, corrected to April 2005 prices. Basing costs on the standard heating regime, which assumes space heating for 9 h a day, is conservative, and may under-estimate the heating costs for older people who may spend a large proportion of the day at home. These should therefore be regarded as minimum estimates of heating costs.
- (ii) Maintenance and repairs, justified because of their importance for security and peace of mind—and the avoidance of falls, fire risks,²⁰ carbon monoxide exposure,²⁷ and to protect against heating system failure during the critical periods of cold. The corresponding costs were made up of three elements: (a) a maintenance contract, giving some sense of security for old people, many living alone, covering central heating, other gas appliances, the electrical system and plumbing and drains, based on the contract offered by a leading national supplier; (b) the (inadequate) actual expenditure recorded in the EFS 2002–04 on maintenance and repairs and (c) a ‘basic cost’ to make the dwelling fit for habitation (which was also an indirect measure of the average annual under-spend on necessary repairs). This was estimated from the 2001 English House Condition Survey²⁶ and divided over 10 years to represent an annualized repair cost.

As detailed in Table 3, the total costs summed to £36.55 for a single person aged 65 years plus and £39.48 for a couple. As elsewhere, there is no allowance for costs of disability.

Medical care

In the UK, NHS general practice and hospital services, including prescriptions, are without cost to people aged 60 and over. For health care, we therefore included only three specific items that may entail cost:

- (i) Ophthalmic services. NHS sight tests (visual acuity, general eye check, intraocular pressure), recommended at biennial (under 70) or annual frequency,²⁸ are free, but not lenses and frames (which are needed by a high proportion of this age-group). Their costs were estimated from the average weekly spend on eye care of people 65+ years in the lowest 40% of the income distribution: £0.80 or £1.60 for a couple. [State help is provided for these costs for those receiving Pension Credit Guarantee or with a partial exemption certificate (Department of Health. NHS charges and optical voucher values (HC12) Effective from April 2003. London: DoH; 2002)].
- (ii) Dental care. Dental services are currently under review,²⁹ but at present old age itself does not give exemption from NHS dental charges in England. Because we were unable to define from first principles the necessary expenditure that may be entailed, we again took figures for the (probably inadequate) actual expenditure for NHS patients aged 65–74 in England and Wales: £0.70 and £1.40. (Data from the Information and Probity Unit, Dental Practice Board 2004).
- (iii) Over the counter medicines. Commonly used by older people. Although their health benefits and appropriateness have not been well researched, we allowed these, and costed them using actual expenditure data for the lowest 40% of the income distribution:²⁹ £0.50 for a single or £1.00 for a couple, per week.

Psychosocial relations/social inclusion/active minds

While there is much evidence on the importance of psychosocial relations for physical, mental and social health and limitation of disability in older people,^{30–32} the mechanisms to facilitate these in the context of everyday living led us to specify such costs as a telephone, occasional gifts to grandchildren and others, modest recreational and entertainment costs, membership fees, a television set (and licence for those under 75), a daily newspaper, an annual UK holiday and a little money for hobbies (Table 4).

This list, which could readily be varied in its detail, represents our collective judgement, after much consultation, of the minimal range of needs essential for healthy living. They cover the reciprocal ties with often scattered family, friends and the wider community; for taking part in society, with all its manifold personal and public benefits; and to provide the stimulation essential to maintaining an active mind—which in old age, together with physical activity, may slow, postpone and perhaps reduce the cognitive decline that is potentially the most disastrous.^{33,34} We have not allowed for costs of Local Authority classes and other popular learning opportunities³⁵—surely now a challenge for forward-looking government.

Other essential costs for personal and domestic care; for getting about and healthy social living, are included in summary Table 5. Costs for ‘hygiene’ allow also for the

Table 4 Psychosocial relations, social inclusion, active minds^a

	Cost (£s) per week	
	Single	Couple
Telephone	4.00	4.00
Stationery, stamps	0.40	0.40
Gifts to grand children, others	1.70	1.60
Subscriptions, social clubs etc.	2.00	4.00
Cinema, sports etc.	1.00	2.00
Meeting friends, entertaining	1.20	2.30
Television set and licence	1.70	1.70
Newspapers	2.40	2.40
Holidays (UK)	3.20	7.10
Miscellaneous, hobbies, gardening, etc.	3.90	5.60
Total	21.50	31.10

^aWe assumed that books are obtained from the public library; the local newspaper is free; and there is no cost for radio. Entrance to museums and galleries is free. Cost of the television licence was averaged over the 65 years *plus*.

Table 5 Summary of costs: minimum income for healthy living: MIHL. Older people without significant disability living in the community, England, April 2005

	Weekly cost (£s)	
	Single	Couple
Diet/nutrition	32.30 ^a	63.70
Physical activity: health, anti-ageing, autonomy	2.10	4.10
Housing, a home	36.60	39.50
Medical care	2.00	4.00
Psychosocial relations/social inclusion: active minds	21.50	31.10
Hygiene ^b	4.80	7.80
Getting about ^c	3.20	6.30
Other costs of healthy social living ^d	11.80	23.30
Contingencies/inefficiencies	8.40	12.30
Total	122.70	192.10
Total MIHL at April 2007	£131.00	£208.00

^aThe average cost for a single man or woman.

^bIncluding personal care, household cleaning, laundry and dry cleaning.

^cProminently bus, rail and occasional taxi.

^dFor example clothing, including footwear and household goods.

grooming that matters so much in old age. Costs in getting about were mainly for bus travel and the occasional taxi.

Summing up

Table 6 seeks to summarize the situation in terms of public policy. Our assessment of the MIHL is substantially higher than the state pension and appreciably more than the official safety net, the Pension Credit Guarantee (after means-testing). Moreover the MIHL applies only to those without significant defined disability—~60% of the population aged 65 years plus (close to five millions currently in England). That leaves ~40%

Table 6 Disposable incomes in old age. England April 2007, weekly

	State pension	Pension credit guarantee ^a	'Minimum income for healthy living' ^b
Single person	£87.30	£119.05	£131.00
Couple	£139.60	£181.70	£208.00

^aRent, mortgage and council tax may be paid after further means testing.

^bFor the ~60% of people, aged 65 plus, living independently in the community and without, significant defined disability. The MIHL excludes rent, mortgage and council tax. Provisional figures up-rated from 2005 like the PCG.

Note: Additionally, winter fuel payments of £3.85 p.w. are made to all households with a person aged 60–79, and £5.77 p.w. for those with a person of 80 plus.

with such disability who may well require additional essential income support and services.

Discussion

The situation described here is specific to the older population of 'high-income' England. It is however a further case study⁵ demonstrating the feasibility of application of our core idea. Essentially, it is an attempt, for epidemiology and public health, to make optimal practical use of the biomedical and social knowledge becoming available from the worldwide research effort since World War Two on essential needs for healthy living. To do so, we sought to assemble current best evidence on requirements for specified populations; then translated this into presumptively acceptable ways of living; and assessed the minimal personal costs they would entail in England today. This, we submit, provides an epidemiological evidence-base for public health and the associated social policies, which have to serve the whole population. Partial attempts at this have previously been made,³⁶ by the Family Budget Unit, for example in nutrition/diet.³⁷ But the customary approach in Social Security, for example, is based on current population consumption patterns, levels publicly acceptable and the political constraints. To the best of our knowledge, the present study is the first attempt at an overall first assessment based on available evidence. Examples from middle- and low-income countries would be welcome and indeed are urgently required. Our attempt, we suggest, is directly in the tradition since World War Two and the establishment of WHO for official acceptance of attainable levels of health as a human right and a prime goal of society.^{38–41} Any such strategy, national or local, will have multiple theoretical and practical implications. It must depend on the stage of economic development, welfare policy, education levels and cultural norms. The condition of health, including public health, services and the availability of relevant data will of course be critical. The attempt to establish such standards as described could be a stimulus and guide to the development of essential data.

We suggest that such an approach as described provides an objective benchmark of the income needed to enable an individual to make healthy choices in key ways of living. It cannot, of course, guarantee that healthy choices will be made and it would be unrealistic to assume that health is, or should always be, the over-riding determinant of how an

individual spends his/her income. Nonetheless, it would be a shortcoming of social policy if officially designated household incomes were below a level needed to allow the basic requirements of healthy living—especially in the context of government priorities to reduce health inequalities. The MIHL calculation is at the least instructive and, arguably, it could provide a criterion for determining what should be minimum income levels.

Our findings for England indicate that the current State Pension and the official safety net, the Pension Credit Guarantee (after means-testing), fall below our estimated MIHL (Table 6). Moreover, as reported, the MIHL is not intended to cover the ~40% of older people, rising with age, nearly all living in private households, who have significant defined disability (Table 1) with the probable additional personal costs entailed. This of course will further increase the disparity between official benefits and the proposed MIHL.

Many older people of course may not be in the situation or have the knowledge or inclination to spend as we have indicated, so that our realistic minimum budget wouldn't 'work'—notwithstanding our allowance for contingencies and wastage. A national commitment to a MIHL, a relatively simple notion,⁴² could be a powerful popular stimulus—and also present a daunting health-education and cultural challenge.

We aimed to translate current best evidence of essential health needs in older people, and other generally agreed conditions of decent social living, into an income requirement, and thereby to stimulate debate about an area of public policy which hitherto has paid too little attention to these issues of health and health inequalities. Surprisingly, ours is apparently the first attempt to assemble such knowledge, to translate it into acceptable ways of living and to specify the required income that arguably should be a basis—a 'given'—for national health and social policy.

In nutrition, for example, the requirements in terms of energy, dietary fat, fibre content, refined sugars, salt and many micro-nutrients has been considered and agreed by international expert committees. There is also abundant evidence of the multiple benefits of regular physical activity in old age:^{14–19} in countering ageing processes, for example partially making good the loss of muscle mass and strength and heart-lung capacity, both of which generally decline by about 1% a year from the 40s. The benefits in weight regulation, improvement of lipid profile, blood pressure, reduction of cardiovascular and diabetes risks and generally in improving quality of independent daily living by improving mobility and other physical capabilities, often in the presence of long term disabilities are generally appreciated. In these areas, we were able to specify needs and costs with some confidence. Hopefully, there will also be some personal *ad hoc* support from health and local authority services.

In other crucial areas our evidence was less secure. For housing, a major deficiency is the continuing lack of specific evidence and standards for many features of the home and local environment that clearly are important for health. For psychosocial needs there is now a consensus from physiology and social sciences, through clinical experience to epidemiology, of their essential importance for health. But our attempt here

was to propose a realistic minimal set of living requirements to meet those needs, and are acceptable for the older person low-income population of England (Table 4). The idea of pricing these most human and sensitive of needs seems absent from the voluminous literature and may appear reductive, but they had to be addressed. They add up, even minimally, to unexpectedly substantial sums—surely with implications for quality of life overall.

For several reasons, our costing of current best evidence, our guiding principle, should be regarded as indicative rather than definitive. Several elements (some of the housing costs, for example) were unavoidably based on actual expenditure by low income families rather than on need. But such expenditure is probably below the level necessary for health as those with low income may often have to economize in areas without immediate necessity (e.g. insurance). We also were unable to pay adequate attention in sensitivity analyses to the potentially substantial variations in costs between individuals, subpopulations and areas. Nor could we test the acceptability of the ways of living that were suggested. Disability, as discussed, may be cited in particular here, and the clinical, social and service complexities are such that we were unable within the present study to address the practical issues of summary costs for policy. *Ad hoc* research here is badly needed on several counts.

Finally, *ad hoc* expert and public national machinery would have to be established to settle MIHLs and for regular reviews.

At the least, the MIHL approach provides an alternative way of defining poverty which supplements the official arbitrary and abstract definition (60% of current national median income after housing costs), that ignores a wealth of relevant knowledge now on offer. We have not attempted to estimate the implications for the Exchequer of applying our income standard in national policies, or to calculate what redistribution of national income would be entailed in such an increase of equality of opportunity for health for the poorest old people. We suggest too that the MIHL approach provides a somewhat different perspective on poverty and income standards for the social sciences which hitherto have made too little reference to the growing knowledge of health.^{36,43,44} It is disappointing also that the exhaustive Turner Commission on pension provision within the UK⁴⁵ did not focus more on health needs.

MIHL also offers a possible, if limited, model for direct and concrete upstream action to address the social inequalities that remain a crucial focus of national health concern. Since the Black report,⁴⁶ now a quarter of a century ago, the health community in particular has lacked such specific remedial proposals to complement its research effort.

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Conflict of interest: None declared.

KEY MESSAGE

- We have proposed the principle of Minimum Income for Healthy Living, based on current best research evidence, biomedical and social, to be used as a benchmark for health policy and for setting basic standards in social provision. Such an elementary step would increase equality of opportunity for health for the poorest people and hopefully thereby reduce some of the prevalent inequalities in health.

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Commentary: Defining a minimum income for healthy living (MIHL): older age, England—a comment on implications for application in the developing world

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Professor Morris and his colleagues have introduced an important perspective on the relationship between income and health in older age in England. In doing so their article also raises questions for the situation of older people elsewhere. In the developing world for example, the inter-relationship of age, health and material security is a critical concern for older populations, many of whom are experiencing significant levels of poverty and ill-health as they age.

This should be a public policy concern for developing countries not least because the rapidly rising proportions of older people living in these countries mean that already nearly two-thirds of the global population of people over 60 live in the global South. This proportion is likely to exceed 70% well before mid-century. Asia, which is currently home to 10% of the world's older people, will have 23% by mid-century.¹ For countries such as China and India, Nigeria and Brazil, population ageing is becoming a significant policy issue.

Despite these growing numbers, the health and material security status of older populations in the developing world are largely unknown. What is clear from the fragmentary evidence that exists is that older people are characteristically among the poorest in many countries.² Poor people enter old age with chronic conditions inherited from a lifetime of physical labour, poor quality living conditions, and in the case of older women multiple pregnancies with inadequate perinatal care. In many cases older people experience chronic poverty, which deepens with advancing age and becomes increasingly difficult to

alleviate, let alone escape. Household support is likely to be limited by the environment of poverty experienced by families and whole communities. The provision either of basic services which older people share with other community members, such as water and sanitation, or targeted provision such as pensions or specialized health care, is likely to be extremely limited or non-existent.

This situation notwithstanding, the principle of defining the requisites for healthy living as a basis for public policymaking is as important for older populations in the South as it is in the North. Good health for the older poor in the developing world has both an intrinsic and an instrumental value. The latter derives from the need for large numbers of older poor people to continue to work, often into very old age. The numbers of people aged 60 and over in poor countries who continue to work are not precisely known but are estimated to be 50% of older men and 19% of older women; in the least developed regions this rises to 71% of older men and 37% of older women.³ For these people a reasonable level of physical and mental health (or at least low levels of chronic ill-health) are essential attributes. Continuing physical activity is likely to be a feature of the lives of the older poor, though diet and nutrition are problematic; many older people survive on a minimal diet, where two meals a day and a sufficiency of fruit and vegetables are rarities.⁴

Adequate housing, sufficient to provide a 'healthy home' as defined by the authors is equally unlikely to be available to older poor people in the developing world. Sound, hazard-free structures, with adequate (or any) water supply and sanitation, and facilitating both privacy and the possibility of social exchange, are rarely available to older people.

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