MODULE 23

Nutrition of Older People in Emergencies

PART 1: FACT SHEET

The fact sheet is the first of four parts contained in this module. It provides an overview of the nutrition of older people in emergencies. Detailed technical information is covered in Part 2. Words in *italics* are defined in the glossary for this module. The Full Glossary accompanying the Harmonised Training Package (HTP) explains other terms. This module highlights key issues for older people that should be considered by the humanitarian response clusters.

Who are "older people"?

In this module, the term "*older people*" refers to **people aged 50 and above**. This takes into account the social construction of ageing in low to middle income countries in contrast to the retirement-from-work age applied in high income countries.

Our ageing world

Almost a quarter of the world's population is over 50 years old. Rapid ageing affects low and middle income countries, with the largest numbers of older people living in Asia, and the fastest growth rates in sub-Saharan Africa. This **demographic transition** is accompanied by economic, social and cultural changes affecting older people in both urban and rural areas, as well as by changing disease patterns, particularly an increase in Non-Communicable Diseases (NCDs).

In low and middle-income countries, **older people play active roles** in their households and communities, through their involvement in livelihoods, income generation, agriculture, childcare and feeding; as well as family and economic decision-making. Making these important contributions and maintaining independence in *activities*[1] *of daily living (ADLs)* for as long as possible, depends largely on older people's health and nutritional status.

Commitments and policies addressing ageing

The **Madrid International Plan of Action on Ageing** (MIPAA), 2002, is the first international commitment to include ageing in national social and economic development policies. It states that: "in emergency situations, older people are especially vulnerable and should be identified as such because they may be isolated from family and friends and less able to find food and shelter." (Objective 2). MIPAA calls for an end to *ageism* and *age discrimination*, including in emergencies.

The Inter-Agency Standing Committee (IASC) (the UN's primary mechanism for coordination of humanitarian assistance) works closely with HelpAge, the world's leading international non-governmental organisation (INGO) focused on older people. In 2008, they jointly produced the **"IASC Guidelines: Humanitarian Action and Older Persons: an essential brief for humanitarian actors"**.

Underfunding for older people in the humanitarian response

Older people form a significant proportion of those affected by emergencies. An estimated 26 million older people are affected by natural disasters every year, with millions more affected by conflict and internal displacement. However, funding does not reflect this. In 2010 and 2011 only 0.7 per cent of funding to the UN Flash and Consolidated Appeals Process was allocated to projects that included at least one activity targeted at older people or people with disabilities.

Older people are often not mentioned in the nutrition policy documents of many countries where emergencies occur, or in donor strategies for interventions and training for nutrition. Older people are also missing from most guidelines and protocols used by humanitarian response agencies. The only INGO dedicated to older people, HelpAge, has produced practical guidelines on dealing with older people in emergencies: guidelines on shelter programmes, health interventions, livelihood, protection and nutrition in emergencies.

Rights of a 'vulnerable' but missing group

Everyone has a right to humanitarian assistance, regardless of age. This is underpinned by the UN Principle of Impartiality, endorsed by the UN General Assembly in 1991.

[1] Activities of Daily Living are: bathing, getting dressed, transferring from bed to chair or from the floor, using the toilet and being continent, without assistance or supports – also described as *functional ability*.

However, despite older people frequently described as a 'vulnerable group' and recognised as having distinct needs, this does not guarantee their inclusion or participation in humanitarian programmes, or the absence of ageism and age discrimination. In line with the humanitarian principle of fulfilling rights and acting with impartiality, the nutritional status and vulnerability assessment of older people in emergencies should be a standard component of humanitarian programming. However, older people are often excluded from assessments and livelihood and recovery interventions (which target younger adults), and from nutrition and feeding programmes (which target undernutrition in young children and pregnant and lactating women). Such focus on children under five years old is based on the high physiological need for energy intake in childhood. It is also due to an historical preferential value given to children by professionals in the humanitarian sector. These two factors have contributed to a low knowledge base about the specific nutrition experiences and needs of older people.

Given what we know about the crucial role that older people play in households and families, a complementary approach to avoiding mortality in young children in an emergency would be to ensure the nutritional status and functional ability of the older people that care for them.

Ageing and nutrition

Many physiological changes accompany the ageing process and can impair nutrition status. These include changes in hormone activity altering body composition, weakening immune status raising the risk of infections, changes in the gastrointestinal tract that interfere with digestion and nutrient absorption and tooth loss which limits food choices and food intake.

Age-related changes in the proportions of fat and muscle in the body are particularly important because of their relationship with functional capacities such as muscle strength and mobility, which are key to independence in ADLs. Increasing age may also bring changes in appetite and a reduction in taste and smell senses, which can affect food intake.

Nutritional requirements

The nutritional requirements (for energy, protein, fat, vitamins and minerals) for older people are very similar to the rest of the adult population. Recommendations for daily energy intake are available up to the age of 60 years, with calorie requirements dependent on weight, *basal metabolic rate* and physical activity level.[2] The energy requirement for a male weighing 60kg, and a female of 52kg, both less than 60 years old, is 1,890kcal (range 1,780-2,010) per day. However, these recommendations are largely based on populations living in developed countries so their relevance to populations exposed to nutrition emergencies more common in low-income countries is unknown. Protein requirements are generally 0.8g/kg/day, providing approximately 10-12% of energy from protein, similar to younger adults. The requirement for energy from fat is also similar to younger adults (at least 15% of energy).[3]

With increasing age and decreasing physical activity, the nutritional requirements of older people for calories decreases whilst the requirements for most micronutrients, especially vitamin D and B12, stay the same or tend to increase. This means that older people need more ***nutrient-dense*** (the amount of nutrients in relation to the energy content of the food) foods: an older person's diet should contain adequate nutrients in a smaller amount of energy.

Fluid intake is also very important for older people because they are more vulnerable than younger adults to dehydration. The daily requirement for water is 30ml per kg, or approximately 1.5-2.0 litres per person (6-8 cups). The increased requirement is due to deteriorating changes in kidney function and a decreased thirst drive.

Risk factors for undernutrition

Inadequate nutritional intake is the main cause of undernutrition in old age. This is influenced by a complex variety of risk factors. They include genetics as well as the physiological, psychological and social changes associated with ageing which affect food intake and body weight. The presence of illness, drug use and declining sensory functions (sight, taste, smell) are complicating factors. Social isolation and lack of supports can lead to depression and loneliness, which are related to undernutrition in this age group. Emotional and psychosocial trauma and changes in social and economic circumstances all affect food intake and food choice.

Undernutrition in older people

The main nutrition concerns for older people in emergencies are acute malnutrition (wasting or oedema) and micronutrient deficiency diseases (particularly of Vitamin D, Vitamin B12 and iron).

The terms *Chronic Energy Deficiency* (CED) and *Acute Energy Deficiency* (AED), commonly used when referring to malnourished children and younger adults, are not entirely appropriate to describe undernutrition in older people because energy is not the only determining factor in this population group. Older people can be affected by *acute malnutrition* or have *stable malnutrition* with long-standing thinness. In emergencies, acute malnutrition in older people can occur quickly among the normally nourished, or it can occur on top of an already existing state of stable malnutrition.

[2] Report of a Joint FAO/WHO/UNU Expert Consultation, 2001. Human Energy Requirements Technical Report Series No.: 724

[3] Ausman L and Russel R, 1994. Nutrition in the elderly. In: Shils M and Olsen J (eds). Modern nutrition in health and disease. 8th Edition. Pennsylvania. Lea and Febiger. Pp 770-9

Assessing nutritional vulnerability

Generally, social and psychosocial factors assume greater significance in the diet, food choices, food intake and nutritional and functional profiles of older people, as compared to other population groups. These are very important in emergency situations. Factors such as widowhood, bereavement, loss of home, witnessing violence and chaos, social and household isolation, and loss of social supports can lead to psychosocial problems from which it is difficult to recover, and which have profound nutritional and health consequences.

Checklists[4,5] and conceptual flow diagrams[6,7] are available for the assessment of nutritional vulnerability in older people, and should always be adapted to the local context. The extent and depth of enquiry will depend on the nature and stage of the emergency and available resources and priorities.

Clinical and medical concerns

The symptoms of kwashiorkor and marasmus observed in children can also be seen in older people. Close attention should be paid to the assessment of **micronutrient deficiencies in older people**, particularly levels of *beriberi* (thiamine deficiency), *pellagra* (niacin deficiency) and *scurvy* (vitamin C deficiency). Attention should also be paid to the **dietary intake of vitamins D and B12, and iron** because of changing physiological requirements with age. More information on micronutrient assessment and interventions can be found in the HTP Module 4.

Underlying chronic diseases, existing infections including HIV and AIDS, medical issues and drug use can be complicating factors in the nutritional status of older people, and should be assessed in emergencies. Assessing deteriorating sensory abilities, particularly loss of sight, will also be very important. More information on health assessment and links with nutrition, and on health interventions, can be found in HTP Modules 8 and 15 respectively.

Anthropometry

There are no internationally agreed anthropometric indicators and related cut-off points to assess nutritional status in older people, including in emergency situations. Research is urgently needed to define anthropometric and contextual indicators, and cut-off points for screening into feeding, and other, programmes and discharge. There are no recommended categories of undernutrition classification for adults above 65 years old.

The latest guidelines from UNHCR/WFP (2011) state that, until new evidence is available, the cut-off points for adults from the WHO Expert Consultation Report (1995) for anthropometry should be applied.[8] However, this **refers only to adults up to 49 years of age and not older people**.

Mid-Upper Arm Circumference, MUAC, is recommended as the nutritional status assessment tool for older people. It is a sensitive indicator for the loss of muscle mass, and is also a simple and highly transportable method for use in emergencies. MUAC can be used for undernutrition prevalence surveys, for individual criteria for admission and discharge into intervention programmes, and for programme monitoring. For both genders, a MUAC measurement between 161mm and 185mm without clinical or social criteria has been used in humanitarian emergencies as a cut-off for moderate acute malnutrition and admission into adult (aged up to 60 years) supplementary feeding centres.[9] However, these cut-offs are yet to be validated and more research is needed.

The use of BMI with older people is often problematic especially when height cannot be measured accurately (although proxy measurements for standing height are available, such as *halfspan*). Body shape, particularly the ratio of sitting to standing height (Cormic Index), in different ethnic groups should be considered in any situation, although this is seldom done in practice. There are also interpretational problems with BMI in older people because of body composition changes with ageing affecting relative proportions of fat and muscle tissue. However, despite these limitations, and lack of evidence of its relationship to outcomes of functional relevance to older people, BMI continues to be used although MUAC is the better choice.

The WHO Expert Consultation Report (1995) for anthropometry recommended a BMI cut-off 16 to categorise severe acute malnutrition in older people (without oedema) up to the age of 65 years. However, field experiences have shown that using this cut-off can result in large numbers of adults who are healthy but thin. Additional clinical criteria (including dehydration, presence of oedema, inability to stand), social vulnerability factors and a history of recent weight loss are important parts of any assessment.

4 Handicap International Disabled, Vulnerable and Frail Persons Assessment Module (see Annex D)

5 Ismail S and Manandhar M, 1999 (Joint publication of HelpAge International and the London School of Hygiene and Tropical Medicine). Better nutrition for older people: assessment and action (page 73)

6 Ismail and Manandhar, 1999 (page 42)

7 Borrell A, 2001. Addressing the nutritional needs of older people in emergency situations in Africa: ideas for action. For HelpAge International Africa Regional Development Centre (page 46)

8 These are: less than 224mms for severe acute malnutrition (SAM) for men, less than 214mms for women. Moderate acute malnutrition (MAM): between 231mms and 224 mms for men, and between 214 and 221 mms for women.

9 Collins S, Duffield A and Myatt M, 2000. Assessment of nutritional status in emergency-affected populations, ACN/SCN

Undernutrition and functional outcomes

In the absence of growth, and with mortality and morbidity outcomes confounded by the accumulative life effects of events, lifestyles and behaviours, functional ability is emerging as the most relevant outcome against which to measure nutritional status in older people. Functional ability[10] can be assessed using self-reported ADL questionnaires, and other tools including physical function tests such as hand-grip strength. These are rarely, if ever, used in emergencies however. More research is needed to clarify relationships between anthropometric indicators and functional outcomes of relevance to older people in low and middle-income countries.

Interventions for older people in emergencies

A broad-based approach to interventions for tackling undernutrition is crucial for older people because of their vulnerability to a complexity of causes: social, cultural, psychosocial, economic, physiological, dietary, and medical. Consequently, a **broad range of intervention responses** will be necessary to tackle all the different determinants of undernutrition and vulnerability in this population group. These interventions should range from protecting health, a healthy environment and livelihoods, addressing social factors, providing care and support networks and improving food intake through various food aid mechanisms.

While food aid remains the dominant form of response to nutrition-related problems in emergencies, it is becoming widely recognised that to have maximum impact, food aid needs to be targeted well and coupled with other non-food interventions that address the health (physical and mental), care and social environments. As with other age groups, responses targeted at older people in emergencies will include those that aim to prevent, as well as treat, undernutrition.

Attention should be paid to the location (distance), layout and design, lighting, safety aids (such as hand rails) and the provision of toilets and kitchens in distribution centres to allow access for older people.

Preventing undernutrition through food

Preventing undernutrition in older people can be addressed through the provision of a general ration, and through blanket and targeted supplementary feeding programmes. The general ration for older people is covered by the same criteria as for adults, but this is often inappropriate in terms of nutrient density. Analysis of the nutrient density and dietary diversity of foods and food intake should be conducted. The level of micronutrients does not usually meet older people's requirements and will need to be addressed.

The utilisation and acceptability of food aid provided are often key areas of concern for older people. It is important to provide foods that are easily prepared, digestible, familiar and culturally acceptable. Provision of fresh food items, nutrient-dense commodities and micronutrient-fortified foods are particularly important for older people.

Non-food interventions to prevent undernutrition

Non-food interventions to prevent undernutrition in older people include income and livelihood support, particularly cash transfers, social support to reduce vulnerability, health and environmental support, social interactions and light physical activity, appropriate shelter and broad community support programmes.

Increasing frequency of food distributions, ensuring easy availability of fuel and water, adapting queuing systems and supplying manageable equipment (such as smaller sizes/capacities of carrying equipment) are ways to improve food security through access to food provisions and feeding programmes for older people.

Treating undernutrition

Using a combination of MUAC and other vulnerability criteria (referred to above) older people with severe and moderate acute undernutrition can potentially be treated in the same way as other adults, through:

- In-patient Therapeutic Care (ITC)
- Targeted Supplementary Feeding Programmes (TSFP)
- Control and treatment of micronutrient deficiency diseases
- Community Management of Acute Malnutrition (CMAM) with stabilisation centres, food aid commodities (such as Ready-to-Use Therapeutic Foods, RUTF) and outreach.

However, with older people often absent from protocols and guidelines there is little documented evidence about whether such interventions are actually happening in emergencies, and very little is known about their effectiveness in this population group.

Integration

In addition to nutrition and vulnerability responses, the impact of the emergency on HIV as it affects older people will need consideration. Disability, gender and protection principles should also be mainstreamed in any response. Principles of early recovery and disaster risk reduction require integration into all nutrition activities for older people, along with the building of national capacity on understanding and dealing with undernutrition in this population group.

[10] Manandhar M, 1995. Functional ability and nutritional status of free-living elderly people. Proceedings of the Nutrition Society: 54; 67-691

Key messages

1. Older people (aged 50 and above) make up nearly a quarter of the world's population and their numbers are growing fastest in low and middle income countries.
2. Older people are increasingly affected by natural disasters and conflicts.
3. Older people have specific vulnerabilities and needs that are often neglected by humanitarian responses.
4. Older people play important roles in household livelihoods and childcare, including child feeding, so it is important to protect their health and nutritional status as much as possible to maintain their ability to function actively in daily life.
5. Functional ability is the best outcome indicator against which to measure nutritional status in older people, in place of mortality and morbidity (and growth) used with children.
6. In line with human rights and UN Principle of Impartiality, humanitarian responses to undernutrition and vulnerability in older people should be a standard component of planning and programming.
7. The causes of undernutrition in older people are complex. They involve physiological, social, cultural, psychosocial, economic, and medical factors in addition to inadequate quantity and quality of diet and food intake.
8. All these factors need to be considered in nutritional vulnerability assessments through use of checklists and questionnaires.
9. With no agreed anthropometric indicators and cut-offs for assessing undernutrition in older people, WHO's 1995 recommendations for assessing physical status in adults should be used.
10. Mid-Upper Arm Circumference (MUAC) is the best anthropometric measurement to take in emergencies.
11. A broad-based approach to interventions for tackling undernutrition in older people is crucial.
12. Non-food based interventions relate to shelter, water and sanitation, distribution systems, social support, medical care, psychosocial support, livelihood and cash transfer activities.
13. Food interventions for older people should focus on the general ration and selective feeding programmes, including CMAM.
14. Nutrient-dense and micronutrient-fortified foods are needed to meet nutritional requirements for older people.
15. The participation of older people in all aspects of planning and programming to prevent and address undernutrition is essential.

Monitoring and evaluation (M&E)

M&E interventions for older people should include analysis of their situation to better understand their specific needs, track their ability to access basic services and to assess the appropriateness of food rations and feeding programmes to meet these needs. For monitoring overall programme effectiveness, monthly information can be collected on various outcome levels: nutritional and health outcomes; community and family supports; and perceptions of programme effectiveness. The population group 'older people' represents a crosscutting theme that needs to be taken into account in M&E programmes.

Participation, voice and inclusion

It is important to take enough time to adapt the physical and social environment and the humanitarian assessment and response system to maximise the participation and inclusion of older people, and particularly older women. Older people can, and should be facilitated to, take an active role in assessments, interventions and monitoring. Tools and guidelines for conducting participatory activities with older people are available from HelpAge and its partners and associates worldwide: see http://www.helpage.org/resources

A caring approach is needed when assessing and responding to older people in emergencies, with attention paid to communication, respect, privacy, dignity and a variety of physical, social and emotional assistance. See also: HTP Module 19: Working with Communities.