Undernutrition in the UK

There is a nutritional component to most illnesses (whether poor nutrition leads to disease or disease adversely affects nutritional status) and their treatment, often involving all the health care professions. Undernutrition can adversely affect every system of the body such as the muscular system (resulting in fatigue, lethargy and decreased peripheral and respiratory muscle strength), the immune system (predisposing to and delaying recovery from infection) and psycho-social function (causing anxiety, depression and self neglect).

As a consequence, undernutrition consumes a disproportionate amount of health care resources. It is estimated that 70% of undernutrition in the UK goes unrecognised and untreated and that, in the community, 5% of the population have a body mass index (BMI) less than 20 kg/m2. In hospitals this figure rises to 20-25%. It is important to recognise that not all people with low BMI are undernourished; some may be perfectly healthy. There are difficulties in defining undernutrition because the anthropometric measurements used are neither age nor disease specific. Ranges and cut-off points to define normal or ideal have been based on healthy young individuals and are applied to the whole population. However, the three key elements that help define undernutrition or risk of undernutrition are: assessment of chronic protein-energy status, history of weight loss, and underlying risk factors including disease and disabilities.

Patients may be malnourished on admission to hospital as a result of a variety of disease-related, social or psychological factors. Mental illnesses such as depression and dementia cause anorexia. Malignancy and acute or chronic physical disease reduce appetite and alter the taste, smell and preferences for different types of food. Infections and malignant disease may also increase nutritional requirements. Neurological and mechanical impairment of swallowing and diseases of the gastrointestinal tract affect nutritional intake. Factors such as social isolation and poverty can play an important role, and disability and immobility can interfere with food purchase and preparation. Taste appreciation also alters with ageing.

It is reported that 40% of all patients admitted to hospitals are undernourished, half of them severely so. Nutritional status tends to worsen during hospital stay and is associated with a worse outcome of the disease and prolonged hospital stay. Studies have shown that 40% of hospital food is wasted, which results in patients receiving only 70% of their energy and protein requirements. Because many patients are discharged from hospital in a worse nutritional state than they entered, a further group of undernourished individuals are discharged into the community, setting up a vicious circle. This can largely be prevented or treated with appropriate screening and management.

Weight loss often continues in many patients during their hospital stay for many reasons. These include surgical treatments and investigations that impair appetite or the ability to eat (whilst increasing nutritional requirements) or treatments and procedures that require a period of nil-by-mouth beforehand, which reduces intake. Frustratingly, sometimes a patient may be nil-by-mouth all morning only to have the treatment delayed or postponed to a later date. Often when the patient returns to the ward, no meal has been saved for them (due to lack of communication or lack of suitable facilities to store it if it was hot) and there may be no other food available to them.

A major contributor to the worsening nutritional status during hospitalisation, however, is the inadequacy of current catering and feeding practices. Hospital catering is beset with all sorts of seemingly trivial problems that add up to one huge problem. For example, the wrong food may arrive for a patient because they were not able to choose it themselves or they have been given a meal chosen by somebody else occupying the bed before them. The meal that does come is difficult to eat, e.g. the provision of individual butter packs that are difficult for frail arthritic fingers to open.
Although special techniques of enteral and parenteral nutrition support are indicated for a minority of patients with failure of swallowing or gastrointestinal function, the majority of patients are dependent on hospital food to sustain them during illness. In many hospitals the three meals provided may be of a reasonable standard, as the catering officers struggle on the tight budget they have, but the range and quality of the snacks (essential to meet increased requirements in many patients) let them down. In many cases, proprietary oral supplements or sip feeds may be of value, but they should not become a convenient substitute for adequate and appropriate food provision.

Hospital menus and meals should provide sufficient choice to offer healthy, balanced, appetising nutrition for all patients. Menus should be designed to meet the needs of particular patient groups, e.g. elderly people, children and ethnic minorities. Adequate choice should be available to meet these needs. Special attention should be given to the requirements of sick and nutritionally vulnerable patients, and appropriate special therapeutic diets for those who need them should be provided. A range of meals specially fortified in energy and protein should also be available in every hospital, and snacks and nourishing drinks should be kept on the ward and routinely offered between meals. The timing of meals should be reviewed and made more relevant to patients' customary meal patterns. All methods of food preparation, e.g. in-house cook-serve or brought-in cook-chill (with ward regeneration) have proved successful, but each is highly dependent on the method of distribution and serving. With proper management, a bulk trolley bedside service serves patients' needs best. Nutritionally vulnerable patients should be placed in wards with kitchen areas, or near ward kitchens, so that special meals or snacks can be prepared for them or, when possible, patients can access the kitchen themselves. The primary responsibility of the nutritional care of in-patients rests with the nurses in charge of the ward; therefore, food should be served by nurses, supported where necessary by other grades of staff trained for this purpose, e.g. ward hostesses, diet technicians/.helpers. Assistance with eating must be provided where necessary. Plate or tray collection should be supervised by nursing staff, to enable patients' food intake to be monitored.

Many studies have shown the benefits of nutritional intervention. Therefore the presence of disease, whether in hospital or the community, should be seen as an indication of the need for nutritional screening to identify those at particular risk and those who might benefit from some form of nutritional intervention. In which case, implementing measures such as improved staff training, nutritional screening and assessment, and monitoring, combined with better catering practices will result in most patients' nutritional requirements being met. Fortified meals, between-meal snacks and adequate ward staffing have all been shown to contribute to achieving this goal, which leads to better clinical outcome, less waste, a shorter hospital stay and a more cost effective service.

Recently a number of schemes and initiatives have been set up to help prevent or combat malnutrition both in hospitals and the community. These include the launch of Better Hospital Food: a new menu for the NHS, and the establishment of the Malnutrition Advisory Group, a group of experts convened to raise awareness and understanding of issues of undernutrition. Community initiatives include the establishment of the Neighbourhood Renewal Unit for deprived neighbourhoods, Sure Start set up to operate local programmes for children and parents living in areas of high poverty and Healthy Living Centres set up to run schemes such luncheon clubs for older people.

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