Netten *et al.* asked whether, in England, a relationship existed between quality of life in care homes and a now-discarded ‘star’ rating used by the regulator [1]. They found both ‘yes’ and ‘no’ answers, the ‘yes’ relating to residential care and the ‘no’ to nursing.

The regulator for England, then the Commission for Social Care Inspection (CSCI), introduced Quality Ratings in 2008. Regulation of care homes now considers 28 domains, of which 16 are deemed core standards [2]. They are grouped in six areas: involvement and information; personalised care, treatment and support; safeguarding and safety; staffing; quality and management and suitability of management. All are, essentially, measures of processes, although they are described as ‘outcomes’. For example, the standards require that homes provide a choice of suitable and nutritious food and support to enable eating and drinking (‘outcome’ 5), rather than a resident-based experience. As a result, it is possible that although a regulator’s report could comment favourably on the engagement of staff and general happiness of the residents, the home could be rated poorly because of deficits in process such as the recording of administration of medicines. It is easy to see how such regulation could potentially focus on compliance with processes rather than on resident contentment. Initially, the Quality Ratings were: no stars (poor), one star (adequate), two stars (good) and three stars (excellent). After a year’s experience, the regulator concluded that the Quality Ratings had a strong impact on the commissioning of care services for people in their community and that they were an effective lever for improving both the quality of services and the outcomes for people who use them [3]. Within 2 years, with a change to the regulatory framework, under the Care Quality Commission, a dramatic improvement occurred and over 80% of homes were reported good or excellent (unpublished analysis by Bupa). It is likely that the dramatic improvement in star ratings was that providers had understood how to satisfy the measurement metrics. It is not so clear whether the changes represented substantial progress in the quality of care as experienced by individuals. This explains why the question posed by Netten *et al.* is important: the Quality Ratings were about the process of care, but did they reflect the outcome of care? Despite these concerns, the paper by Netten *et al.* suggests that measures of care process such as star ratings can act as crude proxies for care outcomes for the residents of residential homes, but not for nursing homes. For nursing homes, it could be that the measures of process were too ‘social’ for people whose needs are driven by disease, disability and frailty; it is increasingly clear that the residents of care homes, particularly nursing homes, are increasingly in these categories [4]. Clinical markers for good care used in hospital care by the Department of Health, the ‘Essence of Care’ benchmarks [5], specifically include continence, pain, skin care and communication, which do not specifically feature in the regulator’s standards. The same argument may be true for assessments of quality of life: social-care-based assessments may be insensitive to the effects of health conditions. Given the similarity between nursing home populations and hospitals, a less social model of regulation and expectation should be considered with a greater focus on outcomes. Possible ways forward for quality assurance away from process might include the development of a range of patient-reported outcome measures (PROM) or other direct measures of satisfaction. Another way forward is benchmarked care between institutions [6], which would be all the more valuable if adjusted for case mix. The presumption of a social model for care homes may also explain the inconsistency of health care provision, as highlighted in the British Geriatrics Society’s ‘Quest for Quality’ [7] and Failing the Frail: A Chaotic Approach to Commissioning Healthcare Services for Care Homes [8]. If care homes are assumed to be social institutions, it is easy to assume that their health care needs are more similar to those of a hotel than those of a hospital. It is surely necessary to regulate the adequacy of health care provision to care homes, especially nursing homes. Therefore, we could see the routine application of health care delivering comprehensive geriatric assessment to nursing home residents and, given the size of the sector, the emergence of a new discipline of nursing home medicine in the UKI.
Abdominal fat is dangerous for arteries even in older people

Both cross-sectional and longitudinal studies have shown that body composition changes with ageing, with increase in fat mass and decrease in muscle mass. Ageing leads to increase in the amount of fat, even without changes to body weight [1]. In normal and obese subjects, body weight tends to increase, peaking at an age of about 65 years in men and later in women, and then decreasing with further ageing [2]. Studies using both anthropometry or computed tomography (CT) to evaluate body fat distribution have clearly shown that with ageing, intra-abdominal fat volume increases, while fat in thighs and calves decreases [1]. Very recently, it has been shown that with ageing, there is also increase in the amount of fat inside and around muscles, as well as ectopic fat deposition [3].

Increase in the amount of visceral abdominal fat and ectopic fat deposition occurs with weight gain and also with ageing.

In this issue of Age and Ageing, Van Dijk et al. [4] confirm the key role of fat distribution on CV risk factors and particularly on blood pressure and arterial stiffness components in older people. In a group of 216 older people with a mean age of 77 years, they report an association between central fat percentage, as evaluated by dual-X-ray absorptiometry (DXA), and aortic blood pressure components. In particular, they found a positive association between augmentation pressure (AP), an index of arterial stiffness, but not augmentation index (AI), and central fat percentage. Their findings regarding the association of AP and not AI with fat distribution confirms and strengthens the importance of this index of arterial stiffness, which is not influenced by the age-related increase in pulse pressure and should be preferred to AI in this population [5].

Fat distribution has been shown to be linked to higher risk of diabetes, hypertension, and dyslipidaemia in young as well as in old subjects. Fat distribution indices are also linked to the so-called metabolic syndrome even in older ages. There are several mechanisms that may link abdominal visceral fat to subclinical vascular damage. Adipose tissue (AT), the major energy storage of an organism, is now well recognised as a complex and highly active metabolic and endocrine organ. Adipocytes, the primary composing cells of AT, not only provide a flexible storage depot for excess nutrients, but are also endocrine cells, secreting hormones that regulate energy intake and expenditure, as well as insulin metabolism and inflammation.

A strong association has been reported between visceral fat and several cytokines, such as interleukin-6, plasminogen activator inhibitor-1 and leptin, that have been shown to be related to endothelial dysfunction [6]. Visceral fat has also been shown to be negatively associated with adiponectin [7], whose protective effect on arteries is well known. Elevated free fatty acid (FFA) levels, whose association with endothelial dysfunction is known, have been shown to be higher in subjects with visceral obesity than in those with subcutaneous obesity [6]. Furthermore, the well-known association between abdominal obesity and impaired lipoprotein metabolism may be another link with vascular damage [8]. Indeed a possible role of angiotensin could be suggested in the

References