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Measuring Progress:

Indicators for care homes

PROGRESS
The EU programme for employment and social solidarity 2007-2013

'Quality Management by Result-oriented Indicators – Towards Benchmarking in Residential Care for Older People' is co-financed by the European Commission in the framework of the PROGRESS Programme of DG Employment, Social Affairs and Equal Opportunities

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The main target audience of this handbook are the key stakeholders of care homes, which includes its management, staff, clients and relatives, as well as policy decision-makers, regulators and sponsors. The handbook contains a set of 94 selected result-oriented indicators that has been developed on the basis of the exchange of experiences and existing tools in selected EU Member States.

The focus of this set of indicators is directed towards the question how care homes can measure and manage improvements with regard to the quality of life of their clients, and the related issues of quality of care, management, economic performance and relationships with external stakeholders. The description of the indicators therefore also embraces proposals on how to apply them and instruments for their use.

The Handbook is available in three languages: English, German and Dutch. The handbook is one of the outputs of the project 'Quality Management by Result-oriented Indicators – Towards Benchmarking in Residential Care for Older People' that has been co-financed by the European Commission, DG Employment, Social Affairs and Equal Opportunities in the framework of the PROGRESS Programme.

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Section 1: Background and introduction

Demographic ageing causes a rising number of persons in need of care, calling for structural changes of existing and emerging long-term care systems in Europe. One strategy to steer the increasing demand and supply was to turn formerly public systems into quasi-markets by complementing public services with new and additional providers (commercial and non-profit organisations). One ambition of applying New Public Management to social and health services was certainly to increase efficiency and effectiveness with the final aim to reduce costs in increasingly market-driven systems. These developments are important drivers to install compulsory or at least voluntary quality management systems and to enhance measures for external control (certification, inspection).

Public purchasers need to know what they are purchasing and who they can trust if new providers appear on the market. Increased transparency, clearly defined descriptions of services and respective quality assurance mechanisms, at best based on mutually agreed indicators, are becoming a precondition for the governance of quasi-markets to assess, compare, monitor and support the sector's efforts in producing more adequate outcomes to users' needs.

At the level of service providers, care homes need to improve transparency not only because of the changing modes of governance (competitive tendering, provider contracts etc.), but also because of changing expectations of residents and their families concerning the quality of care. Strategies to overcome existing shortcomings of the sector include attempts to strive towards further orientation towards user needs, to involve the public as well as to improve structural, process and outcome quality in care homes by means of quality management and respective criteria and indicators. Service providers may also view quality management as a way to achieve greater organisational effectiveness in the delivery of care or in the improvement of the well-being of their users.

Quality assurance as well as developing quality standards in long-term care has equally gained increasing attention at the level of the European Union. In the context of the debate over modernising social services of general interest, and in the framework of the Open Method of Coordination in the field of social security, the desire for EU standards in assuring quality of social services has recently been gaining ground. The project 'Quality Management by Result-oriented Indicators – Towards Benchmarking in Residential Care for Older People' in the framework of the PROGRESS programme results partly from this interest of the EU that highlights "the need to support the promotion of the quality of social services in a more systematic manner" (Commission, 2007: 16).

In the last decade, a broad range of measures and initiatives on the part of insurance bodies, services, organisations and research projects have focused on this subject, and effort has been devoted to furthering the development of quality. Yet because of the diversity of ideas, cultural and organisational approaches, as well as concepts and models, it has not been possible to create a uniform, generally accepted definition of quality that could bring together the various viewpoints of the actors to form a consensus. In light of this situation, it is not surprising that the main emphasis of practical activities remains with the quality of structures and processes. While it is worthwhile to monitor and enhance the framework within which services are delivered as well as the functional and professional basis of delivery, the quality of results and outcomes remains a

challenging area. As with personal services, it is still difficult to disentangle the different aspects producing a specific outcome and to mutually agree upon a common framework.

The project 'Quality Management by Result-oriented Indicators – Towards Benchmarking in Residential Care for Older People' therefore aimed at collecting, sifting and validating result-oriented quality indicators on the organisational level of care homes, based on an exchange of experiences in selected Member States. Apart from the quality of (nursing) care, a special focus was given to the domain 'quality of life'. Economic performance, leadership issues and the social context complemented the domains used to define, measure and assess the quality of results in care homes. Furthermore, one of the objectives was to investigate and gain experience in methods, how to work with result-oriented indicators and how to train care home managers in dealing with the respective challenges.

The project was coordinated by the European Centre for Social Welfare Policy and Research (Austria) and carried out with partners from Germany (the Technische Universität Dortmund, the Ministry of Health, Equalities, Care and Ageing of the State of North Rhine-Westphalia and the Medizinischer Dienst des Spitzenverbandes Bund der Krankenkassen – MDS), the Netherlands (Vilans) and England (City University London) as well as with E-Qalin Ltd representing partners from Austria, Germany, Italy, Luxembourg and Slovenia.

Starting Points

Using existing quality management guidelines and frameworks from the countries represented in the project (as well as the Minimum Dataset from the United States), the project team collected an initial list of performance indicators taking into account different perspectives, including those of residents, relatives, staff, management, and others working in the wider social and political context (for example, regulators and commissioners). The following quality frameworks are at the heart of this project:

- The German (North Rhine-Westphalia) *Referenzmodell* (Reference Model): The 'Reference Models for the Promotion of Quality Development in Nursing Homes' were developed by the Institute of Gerontology at the Technical University of Dortmund, the Institute of Nursing Care at the University of Bielefeld and the Institute of Social Work in Frankfurt. The main objective of this project was the specification of care and social services and development and evaluation of quality criteria and their implementation into everyday life of residential care to improve both quality of care and quality of life for the residents. The components were implemented in 20 care homes (reference models) in North-Rhine Westphalia. For the validation of the implementation and the realisation of the central conceptual elements, a comprehensive evaluation was developed, encompassing, among others, structural data of the care homes, residents' surveys and focus group interviews with staff. Improvement of central requests to the quality of services such as, for instance, the promotion of mobility or higher consideration of psycho-social problems were achieved. The main products of the project are a guide for care homes offering quality criteria for the most relevant services in care homes and a structured implementation guide that takes into account different types of organisations of residential care facilities. The project results represent a valid basis for the further development, definition and measurement of quality in long-term care especially with regard to outcome indicators, taking into account user orientation, transparency, transferability and responsiveness of services provided.

- The Netherlands' Quality Framework for Responsible Care: This framework and set of indicators was developed by the national umbrella organisation of care providers, users of long-term care, professionals, health care providers and the national health care inspectors. It was partly based on the Consumer Quality Index (CQ Index) which was in turn based on the American Consumer Assessment of Healthcare Providers and Systems indicators (CAHPS). Moreover, a set of internationally frequently used objective outcome indicators was incorporated. The set of indicators is currently being implemented in the entire long-term care sector. The first measurement has been carried out among all care homes. The findings were published in July 2008 on a national website for consumers. Moreover, they were incorporated in the annual compulsory report on Social Accountability in September 2008. This set is the basis for monitoring by the health care inspection, for commissioning by health care insurance companies and for quality improvement by internal quality management teams in dialogue with service users and/or their representatives. Furthermore, the Framework offers a basis for benchmarking and consumer choice. Alongside this Framework a national improvement programme and supportive network is focusing on improving outcomes. The improvement programme is based on the collaborative principle. Until now, some 350 care-providing organisations have participated in this programme and significant improvements have been achieved (30 to 50% reduction of negative outcomes). In 2010 the Framework was revised.

- The E-Qalin quality management system is the result of a successful European Commission-funded Leonardo da Vinci project (2004-2007) with partners from Austria, Germany, Italy, Luxembourg and Slovenia. It is based on training of E-Qalin process managers and a self-assessment process during which 66 criteria in the area of 'structures & processes', and 25 foci in the area of 'results' are assessed. As usual in quality management, the E-Qalin self-assessment builds on the PDCA-management cycle (*Plan, Do, Check, Act*) but pays particular attention to the assessment of relevant stakeholders' involvement in planning, implementing, monitoring and improving processes and structures. Thus it takes notice of the specific character of Social Services of General Interest (SSGI) in which users are always co-producers of services. In the area of 'results' the E-Qalin model includes a list of examples for key performance indicators from which care homes may choose, unless they have identified more appropriate indicators elsewhere. Each key performance indicator that was selected under the 25 foci is then analysed following a systematic assessment scheme: Have actual values been collected? Have target values been defined and, if yes, were target values achieved? What trend can be read from the actual values (if at least two actual values have been reported)? How should the results be interpreted? Which factors influence the results? Which 'structures & processes' had an impact on results? Which steering measures should be envisaged to attain the hitherto (un)achieved target values? Which 'structures & processes' have to be changed or improved to realise further improvements? What are the critical success factors for improvements? By involving all stakeholders in the self-assessment and the continuous improvement of quality, E-Qalin strives to strengthen the individual responsibility of staff and their ability to cooperate across professional and hierarchical boundaries. Ongoing attempts to develop and include the assessment of result-oriented key data and to put them into practice in more than 100 care homes in the participating countries have shown that further work is needed to elaborate on the description and definition of results in long-term care.

- National Minimum Standards and Key Lines of Regulatory Assessment (KLORA) in England: The Commission for Social Care Inspection (CSCI) is an independent body, set up by Government to promote improvements in social care and to inspect and review all social care services (including care homes) in the public, private and voluntary sectors in England. It developed a framework for regulation (KLORA) based on the Department of Health National Minimum Standards for Care Homes. KLORA serves to assess residential care facilities in relation to 7 outcome groups which have been developed by the Government department of health in consultation with older people and the residential care sector. Under each outcome group there are a range of standards that residential care facilities should meet. In addition to the KLORA, most inspectors make use of a tool called SOFI (Short Observational Tool for Inspection) which helps assess the outcomes for those residents with dementia. In 2008, CSCI introduced new quality ratings for all care providers, ranging from no stars ('poor') to three stars ('excellent'). Despite being overwhelmed by numerous top-down initiatives from Government, this system has largely been welcomed by the residential care sector; although there is some concern that the move towards less frequent inspection and 'self-regulation' might potentially lead to poor practice not being picked up and acted on quickly enough. From April 2009, the Health and Social Care Bill established the Care Quality Commission (CQC), which took over the functions from CSCI, the Healthcare Commission and the Mental Health Act Commission (MHAC). The new Commission developed on its methodology and criteria for assessing compliance with the requirements and established a new registration system from April 2010. Whilst CSCI (now CQC) focuses on England, there are ongoing changes in regulation across the UK.
- The *My* Home Life (MHL) programme in the UK: In response to a recent consultation on the Framework for Registration of Health and Adult Social Care Providers, the *My* Home Life (MHL) programme (www.myhomelife.org.uk) argued for an outcome-focused and evidence-based regulation for residential care facilities based on 8 evidence-based, relationship-centred themes identified in a vision for best practice that is supported by all the key umbrella organisations representing care homes across the UK. These themes link closely with KLORA and are highly relevant to current discussions about the personalisation of residential care practice and the work on dignity in care. The *My* Home Life programme is a UK-wide collaborative initiative, led by Help the Aged in collaboration with the National Care Forum (represents not-for-profit residential care facilities across the UK) and City University, which brings together residential care providers, voluntary organisations, statutory agencies and care home residents and their relatives to promote quality of life in care homes. MHL is acknowledged by CSCI (now Care Quality Commission) as a valuable programme with an important evidence-based, relationship-centred vision. It also has potential influence with the other regulatory bodies across the UK. For instance, in Scotland, the equivalent regulatory organisation (Care Commission) has integrated the principles and themes of My Home Life into its own quality framework and similar discussions are ongoing in Wales and Northern Ireland. My Home Life offers a new evidence-based, relationship-centred vision which is owned and driven forward by the residential care sector – an important factor when dealing with a sector that feels 'done to' rather than involved.
- The introduction of the long-term care insurance in Germany has given quality assurance of professional nursing services and nursing facilities much more prominence. In this context quality assurance is based on the principles and standards of quality that were agreed between the long-term care insurance as a regulator and the federations of providers of

care homes. Internal quality assurance in residential care facilities is complemented by inspections carried out by the Medical Advisory Service (Medizinischer Dienst der Krankenkassen – MDK). Until late 2009, the MDK performed more than 50,000 inspections in care homes and community care services. These inspections focus primarily on professional aspects of care quality in terms of process and outcome quality. However, by assessing respective conditions of residents important determinants of process quality with direct influence on outcome quality could be identified. These determinants have been increasingly developed over the past few years towards a comprehensive list of outcome-oriented quality indicators.

Methodology and definitions

Starting from the traditional separation of structural, process and outcome quality, the selected indicators cut across both the 'process' and 'outcome'. It is therefore useful to distinguish between these two (Zimmerman et al., 1995):

- "Process indicators represent the content, actions, and procedures invoked by the provider in response to the assessed condition of the resident. Process quality includes those activities that go on within and between health professionals and residents."
- "Outcome measures represent the results of the applied processes."

While Zimmerman et al. (1995) and others before (Donabedian, 1980) focused their outcome measures on changes of the health status, the concept used in this project is broader. The selected indicators are conceived as measurement categories that are able to verify the degree to which results in various quality domains of a care home have been achieved. Apart from a strong focus on quality of life, quality of care and quality of leadership, the list of indicators also considers the different perspectives of residents, staff, management as well as the social context (purchasers, family members, other external stakeholders). The selected indicators are not defining standards. They should, in the first place, support the different stakeholders dealing with them to start working with data that make their efforts more transparent to them and to others in order to make success/failure visible, to reflect upon opportunities and to proactively develop measures for improvement.

Result-oriented indicators aim to define objectives and standards at the level of the individual care home or a group of care homes, either in a regional context or at the national level. For this reason we did not define standards for each individual indicator – only by analysing the degree to which objectives have been reached, stakeholders are incited to think about their correlation with structures and processes, respective improvement measures and the implementation of tangible measures that impact directly or indirectly on the results of the individual indicator.

For the selection of each result-oriented indicator it was thus agreed that it will have to fulfil the following conditions:

- Ability to steer change: The set of indicators should be able to constitute a tool that stakeholders working, visiting and living in care homes can use to bring about improvements. Indicators are relevant to steer change, if they allow verification as to how far the respective organisation has come on its way to reach a defined goal.

- Reliability/Validity/Soundness: The indicators should be based on a body of evidence strong enough as to preclude doubts towards their impact on the quality of life of residents.

- Feasibility: Attention should be paid to the resources needed to collect the necessary information to build the indicator, as time, financial resources and ethical considerations all impose conditions on the information that is available.

- General usability: At best, result-oriented indicators should be applicable in all European care homes. This condition could not be maintained for all Member States due to political, cultural and structural differences both between and even within countries – respective choices will have to be made on the level of individual countries, regions or care homes.

- Quantifiable: Even if based on qualitative information, the indicators must be able to be quantified so as to facilitate the process of benchmarking and of evaluating progress.

Once the initial list of indicators had been selected according to the criteria described above, the second phase of the project (September 2009 to April 2010) was dedicated to the application and validation of these indicators. This was achieved, on the one hand, by means of consensus building with experts in the field (Delphi method) and, on the other hand, by managers of and practitioners in care homes:

- To carry out the Delphi study, ten experts of each participating country (N=70) were invited to participate. These were policy-makers, inspectors, commissioners, service providers and representatives of user organisations as well as researchers in seven Member States (Austria, Germany, Italy, Luxembourg, The Netherlands, the United Kingdom, Slovenia), selected on a set of criteria, such as focus on research and practical experience with the national frameworks. During three anonymous rounds the experts were asked to reflect on both the overall framework and on each individual indicator. Experts reflected on the importance of the indicator, its feasibility, and put forward suggestions for further refinement and/or additional indicators. The project team analysed the results of each round and prepared the input for the next round. A web-based instrument was developed for the study to facilitate this task for the participants. The Dutch partner Vilans organised the survey and analysed its results.

- In order to facilitate a complementary validation process, representatives of about 25 care homes from three countries (Austria, Germany, Luxembourg) were involved in workshops (2 times 2 days) that were designed on purpose to elaborate on methods to work with indicators and to validate their applicability in care homes. These workshops were organised by E-Qalin Ltd and their partners from Austria, Germany and Luxembourg. The reasons for inviting mainly professionals that are applying the E-Qalin quality management system in their care homes to these workshops were threefold. Firstly,

E-Qalin Ltd. as a project partner was ready to organise the workshops and to develop an appropriate workshop design; secondly, managers and staff in these care homes have started to work with result-oriented indicators over the past few years so that it was possible to work with them without starting from scratch, even though, thirdly, it has become evident during this period that there is a great need for further training and additional reflection on the work with result indicators in care homes.

Indicators for which no consensus was reached neither during the three rounds of the Delphi process, nor during the E-Qalin workshops in Austria, Germany and Luxembourg were later discussed in a project meeting involving Delphi experts, participants of the E-Qalin workshops and the project team. Indicators for which no consensus had been reached in the validation phase as well as the 'new' indicators suggested during this phase were finally included/excluded during the meeting.

The present Handbook now contains a validated list of 94 result-oriented quality indicators (Section 4). It also contains hints and encouragements on how to use the indicators in practice (Section 2), in particular on how to apply them with a focus on improving the quality of life of residents and other stakeholders in care homes (Section 3). The Handbook is thus directed at all relevant stakeholders who live, visit and work in and with care homes: management, staff, residents and their relatives, but also public authorities, inspection agencies and policy-makers.

Section 2: Working with result-oriented performance indicators – Approaches and practice in care homes

Introduction

Performance indicators are concurrently being overrated and undervalued. They are overrated by those who believe that they may express quality in care homes by means of simplified rankings and grades only. At the same time, they are undervalued by many managers and staff in social and care services who feel they should escape from competition, transparent service delivery, quality management and comparison of performance.

Both motivations are calling for performance indicators. While benchmarking and grades have to be based on defined methods, valid or mutually agreed indicators and a decently organised data collection, managers and staff of care homes have to show to public purchasers, residents and an increasingly critical public how they are using public money, why their care home is preferable to others and how reliable their services are. Public authorities and other regulators are moving towards a role as purchasers of services. This role necessitates clear descriptions of terms and products. Respective indicators and standards thus have to be collected and presented by provider organisations, but many care home managers are accomplishing this task often mainly to satisfy the funding body rather than to improve performance. Moreover, legally defined minimum standards and accreditation criteria are primarily focusing on structural quality (staff ratio, surface per resident etc.), sometimes on process quality (availability of a complaints procedure, individual care planning in place etc.), but rarely on the quality of results or outcomes. It is thus always questionable, whether such minimum standards are appropriate to do justice to a continuously altering social and economic context, shifting expectations of (potential) residents, relatives and major transformations of labour markets. Nevertheless legally prescribed (minimum) standards will always define the bottom-line of quality in care homes.

Still, we can also observe different trends: many providers have started to adapt quality management systems that were originally developed in the manufacturing industry to the health and social care sector (Evers et al., 1997) and to search for appropriate instruments to measure the quality of results. Furthermore, public administrations are commissioning projects to develop result indicators for the social care sector, and the EU Commission is promoting quality guidelines in the area of social services of general interest.

Result-oriented performance indicators per se give only limited testimony of the quality of a care home. They may point at specific strengths and weaknesses of a care home or at potential problem areas that need further review and exploration. Not more, but also not less (cf. Bullen, 1991).

The collection of data for a specific performance indicator is the starting point for steering and improvement processes by all relevant stakeholders who are involved in the processes and aspects connected to service delivery (Eisenreich et al., 2004). One of the key criteria for sifting and validating the present list of result-oriented performance indicators was their pertinence to steer quality in care homes. A performance indicator is defined as pertinent to steer quality if it

helps to assess how far an organisation has got on its way to achieve an objective that was defined by the management. This means that we are promoting an organisational development perspective on quality improvement, rather than a perspective of standard-setting and/or an approach to measure the performance of entire long-term care systems (see Challis et al., 2006).

Working with performance indicators at an organisational level is thus inevitably linked to controlling, i.e. the management function that provides instruments/methods and the information that supports decision-makers to accomplish planning and control processes more efficiently. Working with performance indicators in care homes, however, goes beyond classical economic definitions and functions of controlling. The complexity of care homes calls for steering in relation to the quality of care, the organisational culture and networking as well as the residents', relatives' and staff's quality of life.

Planning

Work with performance indicators may be planned during strategy development processes or during the introduction of a quality management system. In any case it is important to clearly define objectives, to choose appropriate indicators and to define target values. At this point it will also be useful to check, whether the organisation is actually 'fit for controlling' (see Box) and to implement performance indicators.

The defined indicators and respective target values will hitherto represent the frame and basis for future management decisions. It should therefore be assured that they are quantitative (numeric), pertinent for steering, valid as well as feasible in the current context of the organisation.

Result-oriented performance indicators are markers for the performance of a care home, but they will never be able to display all accomplishments and qualities of an organisation. On the one hand, it becomes relatively futile to collect data for hundreds of indicators (e.g. for all indicators presented in this Handbook), as they cannot be controlled and steered simultaneously. Any flexibility would go astray and staff would become overwhelmed due to excessive data gathering. On the other hand, too few indicators would represent an insufficient framework for triggering improvement processes. For instance, to begin with, a care home might consider using about 10-15 key performance indicators for continuous control of key areas to be monitored and steered. Additional indicators might then be applied at the department level and/or for purposes of legally prescribed or voluntary annual reporting. Furthermore, there might be supplementary indicators that will not be assessed on a monthly or quarterly basis, e.g. those based on surveys that will be performed only once a year or with even longer time intervals (see 'quality of life'). However, it should be noted that there is no evidence base to prescribe how best to use the indicators in this project.

Other planning issues pertain to the distribution of responsibilities for data collection, documentation, analysis as well as reporting. For instance, it is important to consider whether the design and realisation of surveys and their analysis should better be outsourced to external persons or organisations.

Fit for controlling?

Controlling will only take effect if its function is accepted and used by management. This can only be accomplished if there is a shared idea within the organisation about the potentials of controlling and its functioning. This general situation can be assessed by means of a check list to critically scrutinise the following issues:

- *Conducive framework conditions:* Have management and leadership principles been mutually agreed and have they been communicated within the organisation? Are planning and control functions being realised by managers in their respective roles?
- *Defined identity:* Do staff members have a general image about what controlling can bring about and how it works?
- *Standardised steering processes:* Have systematic and standardised processes for planning and controlling been defined and are these being implemented in practice?
- *Appropriate instruments:* Are methods and instruments of controlling and work with indicators easy to handle and compatible with other instruments? Have staff been trained appropriately to work with these instruments?
- *Management and their potential:* Is management staff able, allowed and willing to work with controlling instruments?
- *Functional profiles:* Is the designated controller sufficiently qualified and accepted? Are there clear responsibilities as to who will realise the controlling tasks (if no full-time controller is employed)?
- *Organisational embedding:* Is there a clear place for controlling in the organisational chart?

Source: The entire checklist can be obtained at www.bvmba.net.

Control

Planning without control is meaningless. Only by means of controlling can the following functions of work with indicators be ensured:

- To make objectives (target values) tangible and workable,
- To document performance by means of numeric values,
- To follow the degree to which defined objectives have been achieved by means of a comparison between target values and results (actual values),
- To realise transparency towards residents, families/friends, staff as well as towards external stakeholders (purchasers, deliverers, public),
- To install a system of early warning by continuous monitoring of selected values,
- To identify opportunities for improvement by realising internal comparisons of target and actual values over time both internally and eventually with other care homes.

Systematic controlling has thus to decide and assess which indicators should be chosen and for what reason (clear definitions). Furthermore, it has to be formally decided who will be responsible for data gathering (contact person, administrative support), how the data will be collected (schedules, IT), when and how frequently as well as to whom they have to be reported. Also, it is essential to be clear about the group of people with whom an appraisal discussion will be carried out, e.g. an 'indicator task force'. In general, particular attention should be paid to avoid frustration of staff that, for instance, could arise from having to collect data twice or from imprecise communication about which decisions and tangible interventions were derived from results.

Steering and improvement processes

Result-oriented performance indicators are only a small part of quality management that is geared at describing, assessing and improving results of services in a care home. Data as such rarely speak for themselves. This is why the next steps are of fundamental value:

- A detailed analysis to discuss trends and discrepancies between target and actual values. Such a discussion preferably requires an atmosphere of trust and a dialogue that does not aim at personal attack and respective justification. This kind of appraisal discussion should take place in a timely manner within the 'indicator task force' or in a face-to-face meeting between the manager and a selected staff member responsible for the respective indicator. The aim is to identify structures and processes (critical success factors) in the care home that might have influenced the (un)achieved result.

- Apart from identifying impediments to target achievement, it is then necessary to address what kind of steering activities could be developed to trigger a further step for improvement or, at least, to avoid further non-compliance with defined standards.

Performance indicators in practice

The systematic embedding of result-oriented performance indicators as part of management tasks in care homes has only just begun. Planning and steering are, at best, based on cost accounting. Surveys and the analysis of qualitative indicators from a resident and/or relative's perspective (quality of care and assistance, quality of life) or in relation to the quality of working conditions still represent new frontiers. This is particularly true when it comes to derived strategies and respective improvement processes.

One reason for lagging behind in this approach is certainly the fact that personal social services have for a long time been oriented exclusively at professional ethics and the quality of relationships, rather than at economic efficiency and the quality of results. In a context of diminishing social care budgets, growing market orientation (keyword: New Public Management) and higher expectations of users, as of this date providers and purchasers of social services are confronted with new challenges calling for controlling, efficiency and evidence-based indicators. However, social care providers are solicited not to 'throw out the baby with the bath water' by now focusing all their energy on economic criteria and forgetting about the characteristics of personal social services. These specificities have to become part and parcel of respective quality management systems while, at the same time, being underpinned by facts and figures, among others by result-oriented performance indicators. Only on this basis will it be possible to frame

negotiations with purchasers on prices *and* quality, and perhaps to move towards transparent and 'quality-based' payment schemes.

Before getting there, a lot of flip-chart paper will be filled with graphs and keywords, but various approaches have already been started in different Member States, calling for networking and an exchange of experiences. The project 'Quality management by result-oriented performance indicators' responded to this demand in multiple ways. One of them was the organisation of validation workshops with care home and quality managers in Austria, Germany and Luxembourg. These workshops had two main aims: first of all, to encourage and realise national and transnational exchange about practical, missing and new issues in working with performance indicators. Secondly, the involvement of participants in the validation of the preliminary list of indicators aimed at a practical exchange with a European perspective.

Workshops to develop and validate performance indicators for care homes

Objectives

- To define and reflect upon result-oriented performance indicators: which indicators are pertinent to steer quality development in care homes?
- To identify relevant steering tasks in care homes: how far can indicators support improved steering?
- To exchange experiences with key performance indicators.
- To get acquainted with new internationally applied indicators: what is their relevance for care homes in my country?
- To develop criteria for validating indicators depending on the various contextual conditions.

Target group

Care home managers and management staff with experience of working with result-oriented performance indicators, in particular those with controlling knowledge.

Methods

Interactive workshop, facilitation, working groups, validation tools.

Workshop 1 (2 days)

- Presentation of the project and information about tasks; expectations of participants
- Definitions: key result-oriented performance indicators, quality, steering, working with indicators, controlling and indicators, leading with indicators
- Identification of steering tasks in care homes and relevant indicators
- Exchange of experiences from work with key performance indicators
- Presentation of additional indicators based on international experiences
- Tasks and criteria for validating indicators between the two workshops

Workshop 2 (2 days)

- Feedback of participants on the relevance of presented indicators
- Reflection about criteria and their relevance in different contextual conditions
- Choice of the 10-15 most relevant indicators for individual care homes (depending on context) and elaboration of a plan, how to work with these indicators that will be implemented in the respective care home

A first finding of the workshops was that, in daily practice, systematic controlling with key performance indicators is taking place at best in a rudimentary manner: data collection and satisfaction surveys are rare, while resistance of staff who fear losing autonomy and control is widespread, as well as a general apprehension of comparisons and transparency. Monitoring quality of results and quality assurance in the context of yearly inspections are mainly used to satisfy the regulator, but the implementation of quality management systems has started to increase awareness for quality development, also by means of strategic planning in care homes (see Table 1).

Table 1: Overview of different contexts for applying result-oriented performance indicators

Context *Objective*	Systematic controlling in daily practice	Monitoring quality of results and quality assurance	Strategic planning
Range of indicators	10-15 key performance indicators	20-25 performance indicators, respectively those foreseen by the respective quality management framework	Revision and selection of appropriate performance indicators for steering and controlling
Main source or method	Continuous documentation; data collection on purpose	Continuous documentation, special surveys, external audit or inspection	Evaluation of work with indicators; revision of controlling instruments
Frequency	Daily, weekly, monthly, quarterly	Yearly (every 2 years)	Every 3-4 years

Experiences

Participants of validation workshops were mainly chief executives of care home groups, care home managers, head nurses, quality management officers and controllers from private, quasi-public and private non-profit organisations. They identified a variety of hitherto neglected or barely tapped potential of working with performance indicators. Such instances included following trends over longer periods of time, comparisons within a group of care homes but also with other providers as well as first steps towards benchmarking in a regional environment.

A specific, mostly unsolved challenge for the management staff seems to consist of fear to not pick the 'correct' key performance indicator – and thus they often prefer not to choose any. It was

thus important to discuss the relevance of indicators in different contexts, in particular when going beyond pure business data. During the first workshop participants already found out that indicators are not 'good' or 'bad' as such, but they serve to analyse potential problems and help steer improvement measures. Working with indicators means goals must be set that are measurable and traceable – be it in the area of nursing care, in supporting quality of life of residents and staff, leadership or economic performance, and in relation with families, partners and suppliers. Only if data on the "percentage of residents with pressure ulcers that started in the care home" have been collected and only if target values have been defined, can one control over time whether target values have actually been achieved. Only if periodic satisfaction surveys with residents, families and staff are accomplished, may one reflect upon results and design corrections. Only through a decent analysis on why targets were (not) achieved can improvement measures be developed and implemented.

By focusing on 10-15 *key* performance indicators, as well as the systematic controlling and a dialogue about related issues in daily practice, a continuous improvement process in the care home can be set in motion. Once staff and management have started to implement this approach it will be easier to choose appropriate *key* performance indicators and to distinguish them from other performance and result indicators that have to be monitored.

At the beginning of the second workshop participants provided feedback on the preliminary list of indicators by means of a traffic-light system (useful for all, useful under specific conditions, not at all useful). Further on they also ranked indicators to end up with about 15 indicators that they considered the most relevant or useful among the indicators. Related planning and first steps towards implementation were at the centre of the second day, with respective working groups elaborating on two indicators.

Altogether, participants came out with a lot of enthusiasm from these workshops as well as with suggestions for their daily practice, methods and instruments to work with the indicators. Apart from choosing indicators and getting to grips with their operationalisation in terms of clear definitions, the next challenge for managers is now to identify critical success factors and to link analysis and steering processes in their daily practice. The workshops have in any case contributed to reducing fears about bureaucratic control and punishment when working with performance indicators.

Recommendations

The validation workshops of key performance indicators have resulted in the identification of fundamental aspects at different levels in relation to working with indicators in care homes:

- There is a strong interest in result-oriented performance indicators if transparency is not being approached and experienced as a mere external obligation. The German MDS also reports that inspections by means of indicators are usually perceived by management and staff as encouragement and recognition of their performance.

- Result and performance indicators are not an end in itself, but an instrument to trigger reflection and dialogue within the organisation about the causes and potential consequences of interventions.

- Working with indicators can facilitate quality improvement in the care home independently from the quality management system that is being applied. However, living-up to the intentions of quality management by involving front-line staff, forging partnerships with other stakeholders and linking performance measures to strategic management decisions will enhance its impact.

- Systematic controlling and the identification of critical success factors in connection with achievements reflected in performance and result indicators have to be underpinned by enabling mechanisms such as appropriate training and the preparation of staff (see Box).

- The evidence base for choosing and analysing appropriate result-oriented performance indicators and respective standards for care homes is relatively scarce and calls for further investigation.

To conclude, an important step to further disseminate and promote work with result-oriented performance indicators in care homes would certainly consist in establishing a dialogue between providers and purchasers – respectively inspection units and organisations representing (potential) residents. The aim would be to mutually agree upon the scope and meaning of performance indicators, their choice and the degree of transparency that would be felt conducive and acceptable by all stakeholders.

Potential content of trainings on result-oriented performance indicators in care homes

- Definitions: performance indicators, result-oriented performance indicators, steering quality, working with indicators, controlling and result-oriented indicators, leadership and indicators
- Identification of steering tasks in care homes and relevant result-oriented performance indicators
- Exchange of experiences with indicators in daily practice
- Development of own indicators, e.g. based on those presented in this handbook
- Presentation of result-oriented performance indicators (see Section 4)
- Reflection on criteria about the relevance of indicators in different contextual circumstances: differentiation between performance indicators, result indicators, key performance indicators and key result indicators
- Selection of 10-15 *key* performance indicators for participants' own organisations to start the implementation of systematic controlling in daily practice
- Planning the implementation of result-oriented controlling in care homes: conducive framework conditions, planning, responsibilities, systematic steering

Section 3: The challenge of indicators measuring quality of life

Introduction

The main focus of quality initiatives is often placed on the quality of structures and processes. This is due in the first instance to the professionalization of long-term care, with a particularly strong focus on the qualification requirements of staff in the past and with an emphasis on raising the quality of care processes. The second point is that the change to a user-oriented, user-participation perspective required for stronger outcome orientation is taking time to evolve in Europe, particularly where quality of life aspects are involved. But still it is often overlooked in the course of practical work, although it recently has been receiving a lot more attention from specialists in the field. In addition, there is no agreement on the weight that should be attached to the various aspects of a potential outcome. This is particularly evident in the debate on quality of life, which plays more of a token role in many concepts than that of a conceptually sound, fully operationalised construct being implemented in everyday practice. The outcomes of care interventions frequently lack satisfactory evidence and reliable indicators, but this is even more the case when applied to quality of life, particularly in its evaluation from the perspective of users and care recipients.

For research on quality of life, no uniform tradition of research exists. Therefore it is not surprising that the terms 'quality of life', 'satisfaction' or 'well-being' which are used in this connection have been taken up by various branches of research, but without being integrated into an overall conceptual understanding of what older people want from quality of life in care homes. The term 'quality of life' is closely connected with 'welfare'. Accordingly, quality of life is a complex, multi-dimensional concept simultaneously comprising both tangible and intangible, objective and subjective, individual and collective aspects of welfare, with the emphasis on 'better' rather than 'more'. Since the 1970s, welfare research has also increasingly been focused on the partial aspect of the subjective dimension, known as 'subjective well-being'. Apart from this branch of research, psychologically oriented well-being and health research (Abele/Becker, 1991; Mayring, 1987) also attributes great significance to the subjective aspects of quality of life. Although it has so far been unable to establish a uniform conceptual understanding of quality of life in old age, ageing science has identified 'well-being' and 'satisfaction' as key indicators of a successful ageing process. Concerning research with older people, it should be noted that in recent years progress has been made to measure the subjective and objective quality of life with regard to the areas of health-related quality of life, home environment and aspects of participation and social support. However, research on the quality of life for older people in health services and long-term care institutions is still in need of further development. Research concerning the quality of life at a very advanced age which also includes older people with dementia, is currently still very rudimentary.

The concept of 'quality of life'

Accordingly, quality of life essentially comprises two dimensions, a subjective as well as an objective dimension. The objective dimension can be measured with the help of suitable 'objective' indicators of the individual's situation in life. Here, relevant aspects are the socio-economic status, the home and its environment, social relationships and social support as well as the degree of participation in public life. However, this presupposes that these are important features for that particular individual, unless they have been identified as being important by the individual. The focus of the individual component here is more on the individual assessment of their situation, that is their perception of the quality of life in these and other areas, which includes cognitive and emotional as well as behavioural aspects. In this context it is important to note that individually perceived quality of life not only includes relevant areas of life, but also intangible and collective values such as 'freedom', 'justice' or the degree of 'autonomy' as experienced by the individual. This is of special importance for the quality of life of care home residents whose scope for determining and influencing their own objective living environment is limited and also highlights the significance of other intangible components such as 'dignity', 'privacy' or 'safety'.

In positive cases, the agreement between both perspectives ('good' objective conditions and subjective assessments) can be taken as an indicator of a high or good quality of life, while in negative cases ('poor' objective conditions and subjective assessments) the quality of life can be regarded as low or 'poor'. But often the connection between subjective quality of life and objective criteria is only meagre (inter alia Kane, 2003), a phenomenon also known as the 'paradox of ageing', with research results indicating that especially older people with declining objective resources show a high level of satisfaction (Mayring, 1987; Smith et al., 1996; Staudinger, 2000). However, not all quality of life researchers regard this empirically verifiable phenomenon as a paradox, but sometimes also interpret it as an effect of the plasticity of old age (Lehr, 1997) and/or a successful coping strategy. Basically, these findings also invariably raise the question of validation (validity) of the answers from residents. Kane (2003) describes validation of the subjective phenomena as one of the fundamental challenges in research about quality of life, even though there is no conclusive answer to this question.

However, the consequence of restricting investigations exclusively to examine objective criteria for the quality of life would lead to the exclusion of an essential aspect, since particularly the findings from health-related research about quality of life (inter alia Idler, 1993; Filipp/Mayer, 2002; Lehr, 1997; Lehr/Thomae, 1987; Mossey/Shapiro, 1982) overwhelmingly demonstrate the significance of the subjective aspect.

There is more or less universal agreement concerning this general conceptualisation and the distinction between subjective and objective components. With regard to measuring the subjective quality of life, however, different views exist about approaches and methods. For instance, a distinction is made here between the cognitive component of 'satisfaction' and the emotional component of 'happiness'. Another approach to conceptualisation following Lawton (Lawton, 1984) distinguishes four aspects of subjective quality of life:

- a negative emotional factor,
- a positive emotional factor,
- happiness as the conviction that the positive emotions exist on a long-term basis, and
- goal congruence, i.e. the conviction of having reached one's personal goals.

Here, happiness represents an important factor of well-being, comprising current (a state) as well as habitual well-being (a trait). Current well-being includes a person's present experience, positive emotions, moods and physical feelings as well as the absence of discomfort (Abele/Becker, 1991: 13). Habitual well-being covers "statements about the well-being that is typical for the individual, i.e. assessments of aggregated emotional experiences". It should be noted that the term 'well-being' in this context is to be understood normatively (positively).

Often discussed is the connection between the quality of long-term care and the quality of life. Empirical research provides no uniform answer to the question of *how the quality of care-giving and the quality of life are interrelated*. In everyday theory, it is assumed that there is a positive correlation between the resident's quality of life and the quality of care-giving. According to such assumptions, quality of life could serve as an indicator for the quality of care-giving. The available research results on this topic are only scanty, and they present an inconsistent picture, depending on which aspects of the quality of life and care-giving have been investigated. However, the studies carried out so far often show no connection between the quality of care-giving and the quality of life (Challinger et al., 1996; Rubinstein, 2000; Sowarka, 2000).

The relationship between quality of care-giving and quality of life is linked to the question of how quality of life is understood and defined. If quality of life is understood as synonymous with conditions (of life), it amounts to an input analysis (Veenhoven, 1997; Filipp/Mayer, 2002). In that case, the quality of life is seen as a condition depending on the quality of care-giving. If, on the other hand, quality of life is defined as a person's subjective, individual view (Veenhoven, 1997; Filipp/Mayer, 2002), a connection between the quality of care-giving and the quality of life does not necessarily exist.

Dimensions of quality of life in care homes

Research on the quality of life in care homes for many years had a rather low priority, which was due to a strong focus on the investigation of 'traditional' quality of care topics as well as to a certain amount of aversion against science and measurements by those who are responsible for improving the quality of life in practice (Kane, 2003).

Quality of life dimensions to be described by means of objective indicators cannot be applied in the same way to every age. This is particularly true for care home residents. In addition, different conceptualisations of quality of life appear in the literature. For our work, we selected the following concepts, which, on the one hand, represent different approaches to conceptualizing quality of life in nursing homes and on the other hand, have overlapping themes, aspects and perspectives.

As a representative of a strong empirical approach, Kane (2003) defines the following factors as important aspects of quality of life for older people in care homes, derived from extensive research on the user perspective.

Table 2: Relevant Quality factors from the resident's perspective

• physical abilities	• pain / discomfort
• self-care (autonomy)	• energy, fatigue
• daily activities	• self-respect
• social functions	• sense of mastery
• sexuality and intimacy	• subjective health
• psychological well-being and grief	• satisfaction with life
• cognitive abilities	

Source: Kane, 2003

Kane points out that many care homes focus on the quality of care and on disease-specific aspects and do not take enough into account quality of life aspects. She pleads for direct and systematic inquiries and sees the main challenge in a necessary culture change in nursing homes.

Another approach from the UK that has widely influenced the development of a UK-wide initiative to improve quality of life in care homes for older people (*My* Home Life programme; for more details see http://www.myhomelife.org.uk) focuses more on different perspectives and takes into account the view of residents, staff and relatives (NCHR&D Forum, 2007).

This review of the literature updated a previous review by Davies (2001) on the care needs of older people and family care-givers in continuing care settings. For the purposes of this project, items for the review were identified from the fields of nursing, health, medicine, allied health, social gerontology, social work and psychology. Synthesis of this diverse literature focused upon the experiences of residents, family care-givers and staff in order to identify strategies which practitioners could use to enhance the quality of life of residents of care homes, while also supporting care-givers in the most appropriate way. An appreciative inquiry approach was taken (Cooperrider et al., 2003) to focus on positive messages, rather than poor practice. Where possible, reviewers were asked to word their messages positively, identify examples of good practice and ensure the older person's voice remained central to the work.

Eight evidence-based, relationship-centred themes underpin the *My* Home Life (MHL) programme. Three of the themes are about the approach to care (Personalisation) and include '*Maintaining identity'; 'Sharing decision-making',* and '*Creating community'.* Another three themes (Navigation) are focused on what staff need to do to support residents and relatives through the journey of care and include '*Managing transitions'; 'Improving health and healthcare'* and '*Supporting good end of life'.* The remaining two themes are about 'Transformation' and are concerned with what managers need to do to help support their staff to put the previous six themes into practice ('*Keeping workforce fit for purpose'* and '*Promoting positive cultures')*. See the following table for a fuller explanation of each of the eight themes.

Table 3: *My* Home Life: Themes for promoting quality of life in care homes (NCHR&D Forum, 2007)

Maintaining Identity (*Personalisation*)	Working creatively with residents to maintain their sense of personal identity and engage in meaningful activity.
Creating Community *(Personalisation)*	Optimising relationships between and across staff, residents, family, friends and the wider local community. Encouraging a sense of security, continuity, belonging, purpose, achievement and significance for all.
Sharing Decision-making *(Personalisation)*	Facilitating informed risk-taking and the involvement of residents, relatives and staff in shared decision-making in all aspects of home life.
Managing Transitions *(Navigation)*	Supporting people both to manage the loss and upheaval associated with going into a home and to move forward.
Improving Health and Healthcare *(Navigation)*	Ensuring adequate access to healthcare services and promoting health to optimise resident quality of life.
Supporting Good End of Life *(Navigation)*	Valuing the 'living' and 'dying' in care homes and helping residents to prepare for a 'good death' with the support of their families.
Keeping Workforce Fit for Purpose *(Transformation)*	Identifying and meeting ever-changing training needs within the care home workforce.
Promoting a Positive Culture *(Transformation)*	Developing leadership, management and expertise to deliver a culture of care where care homes are seen as a positive option.

My Home Life provides a conceptual framework for promoting quality of life in care homes for older people and is underpinned by relationship-centred care (Tresloni and the Pew-Fetzer Task Force, 1994) and the Senses Framework (Nolan et al., 2006). Based on empirical research in care homes asking older residents, relatives and staff what is important to them, Nolan et al. (ibid.) suggest that the fulfilment of six senses (security, belonging, continuity, purpose, achievement and significance) is key to good relationships in this context (see Table 4 for a fuller explanation of each of the six senses).

Table 4: The Senses Framework (Nolan et al., 2006)

Sense of security	• to feel safe
Sense of belonging	• to feel part of things
Senses of continuity	• to experience links and connections
Sense of purpose	• to have a goal to aspire to
Sense of achievement	• to make progress towards these goals
Sense of significance	• to feel that you matter as a person

Based on Nolan's research, attempts have been made to construct tools (CARE profiles) to measure quality of life from the perspective of older residents, relatives and staff in care homes (Faulkner et al., 2006). The CARE profiles were developed and tested and an Event Frequency Approach was adopted to create three questionnaires (residents, relatives and staff), each containing 30 consensually valid positive events. The thematic content of these events was balanced for each questionnaire using the Senses Framework as a theoretical model. Once completed, the CARE profiles were tested in four care homes. Although the CARE profiles are helpful in measuring quality of life in care homes, not only from the perspective of residents but also from those of relatives and staff. Further development of the profiles is needed if the experiences of cognitively impaired residents are to be included in the assessment process.

In different meta-analyses, Schalock (Schalock, 2006) identified eight core quality of life domains and the three most common indicators for each of the core QoL domains. This conceptualisation can help to operationalise the general domains and formulate specific questions on the QoL of residents.

Table 5: QoL Domains and Indicators (Schalock, 2006)

QoL Domain	Indicator (and Descriptors)
Emotional well-being	• Contentment (satisfaction, moods, enjoyment) • Self-concept (identity, self-worth, self-esteem) • Lack of stress (predictability and control)
Interpersonal relations	• Interactions (social networks, social contacts) • Relationships (family, friends, peers) • Supports (emotional, physical, financial, feedback)
Material well-being	• Financial status (income, benefits) • Housing (type of residence, ownership)
Physical well-being	• Health (functioning, symptoms, fitness, nutrition) • Activities of daily living (self-care skills, mobility) • Leisure (recreation, hobbies)
Personal Development	• Personal competence (cognitive, social, practical) • Performance (success, achievement, productivity)
Self-determination	• Autonomy/personal control (independence) • Goals and personal values (desires, expectations) • Choices (opportunities, options, preferences)
Social inclusion	• Community integration and participation • Social supports (support network, services)
Rights	• Human (respect, dignity, equality) • Legal (citizenship, access, due process)

Summarising the issues

Quality of life research with older people and care home residents has brought about, among other aspects, the following key issues (Schönberg, 2006):

1. The significance of various aspects of life depends on a person's age.

The results of the welfare survey, for example, show age-specific degrees of significance in different areas of life. The areas of 'health', 'religious faith' and 'protection from crime' are of greater significance for older people than for younger age groups.

2. The subjective assessment of a situation in life is more important than its objective criteria.

Objective conditions of life mainly have an indirect effect on subjective well-being but there is not a direct connection between both. The concept of QoL always requires a value judgement concerning the question "What is a good life?", which in the context of our work mainly requires a subjective approach. For example, independently from an objective health assessment, subjective health in particular is a vital factor in quality of life and can even serve as a predictor for mortality (Idler, 1993; Mossey/Shapiro, 1982).

3. Care home residents have a poorer quality of life than other older people.

This result was proved empirically by the extensive BASE study. Concerning the quality of life of care home residents, this group was shown to represent "an identifiable sub-group of older people with a higher risk of impaired well-being" (Smith et al., 1996: 511). "(However)...it is extremely important to point out that this negative difference could already have existed prior to moving into a home" (Smith et al., 1996: 512).

These results point to various facets of further research needs on the quality of life of older people living in care homes. For example, the question arises how residents "(...) arrange their own hierarchy of values when their living space becomes increasingly restricted" (Sowarka, 2000: 79).

Last but not least, findings on the quality of life of residents suffering from dementia have only appeared during recent years and will need more investigation. It has been shown, however, that to a certain degree persons with dementia are also able to provide personal information about their quality of life (Kane, 2003).

Quality of life indicators – methodological challenges and potential solutions

As shown, the assessment of QoL is a key category, especially for those in need of long-term care. Accordingly, besides quality of care, an assessment of quality of life is an essential part of any complete set of indicators.

A number of requirements need to be fulfilled should the future development of indicators be backed by a reliable knowledge base, if transparency and comparison are to be facilitated to guarantee satisfactory service provision for people with long-term care needs:

- Quality criteria and quality indicators need to be developed based on evidence, i.e. on the "conscientious, explicit and reasonable use of the currently best external scientific evidence to back decisions made in the medical service provision to individual patients" (German Network for Evidence-based Medicine, 2008). The respective principles are also relevant for long-term care: what demonstrable benefit is associated with specific interventions and how should it be measured?
- The development of indicators should be conducted on an interdisciplinary basis. Experts from care science, gerontology, medicine and social work should be brought in along with long-term care practitioners to ensure that the focus is not restricted to the classical nursing care areas and involves the quality of life perspective to obtain a picture that is as broad as possible.
- In order to improve long-term care provision, the development of QoL indicators should be linked to the organisational development of services and institutions. References to long-term care and quality of life aspects mentioned could be used in initiating reorganisation measures that take into consideration the concerns of residents, relatives and staff.
- Indicators must correspond with scientific quality criteria: objectivity, reliability and validity. Reliability is used to describe the degree of accuracy with which the assessed feature is measured. There are various statistical procedures, which can be used here: both the calculation of *internal consistency* (Cronbach's Alpha) and, in particular, the *retest-reliability* are of importance. The latter tells us if the results obtained on two occasions from one and the same person co-relate. The validity of a measure reveals how well an instrument measures what it is supposed to measure. In this context the validity of content and concurrence are particularly important as they allow drawing conclusions about the quality of the instrument and whether all relevant aspects of outcome quality have been covered. Other established procedures used to measure concurrent validity measure similar, but not identical characteristics.
- The risk adjustment (also risk elimination) of indicators is of specific significance with regard to the comparison of services and institutions. Risk adjustment means to exclude factors that are not dependent on the service performed by the institution but which nevertheless influence the measurement of the indicator (e.g. age, previous illnesses, and profile of the care need). The "neutralisation" effect of risk adjustment can avoid, for instance, that institutions with a majority of residents with high-level care needs or other circumstances (e.g. a high percentage of people with severe dementia) show worse results than those with residents needing less care and support. Risk adjustment will be an even more important challenge for the future development of QoL indicators because the definition of risks in the relevant domains seems to be an even more complex task than in the 'quality of care' domain.

Measuring quality of life in care homes

There is a special need to ensure that QoL indicators and instruments to measure QoL are transparent, can be understood easily and are user-friendly, both for staff and especially for care recipients and their families to give them the opportunity to express their needs, and to support them in their search for suitable options.

In research on the quality of life in care homes, various methods of empirical social research are applied, such as

- direct interviewing of residents,
- representative interviewing of close relatives and/or nursing staff,
- observation of the behaviour of residents,
- collecting objective information about physical, social and environmental aspects.

Each of these methods has its advantages and disadvantages. When residents are interviewed directly, the "witness problem" occurs, that is, subjective assessments do not allow conclusions concerning objective facts. Interviews with representatives about the resident's quality of life have shown that their assessment often deviates from the assessment of the residents themselves ('representative problem' – Cohn/Sugar, 1991; Lavizzo-Mourey et al., 1992).

The collection of objective facts in quality of care is often the preferred method for creating indicators. However, on the basis of such data it is very difficult to make any statements about the individual quality of life, despite its importance as already mentioned.

Personal outcomes can be analysed at the level of the individual, aggregated at the organisation or systems level, and complemented by other performance measures such as health and safety indicators, client movement patterns, staff turnover and unit costs (Gardner/Carran, 2005; Human Services Research Institute and National Association of State Directors of Developmental Disabilities Services, 2003).

It can also be suitable to use a shorter questionnaire that focuses on one or two issues instead of trying to implement an instrument that may overburden the institution. Both the interviews as well as the collection of data should be done externally (Schalock et al., 2008) as staff generally do not like to work with such data, are not trained in data analyses and/or are afraid of data due to its frequent negative association with evaluation and its potential consequences with regards to licensing, funding certification or investigation.

Data management has frequently not been handled well in the past, which impacts how the organisation accepts information and its willingness to act on it. Certain ways to improve this could be to (Schalock et al., 2008):

- Help the personnel understand the contextual factors affecting the obtained results and support adequate interpretation,
- Provide personnel with specific suggestions as to how the data can be used to enhance personal outcomes or other performance indicators,
- Stress that the primary purpose of data collection and analysis is for QI purposes and not to evaluate the goodness/badness of the programme/services provided,
- Emphasise that any evaluation represents only a point in time and that using data for QI is a continuous process that requires a long-term commitment.

Interpreting the outcomes

As shown, the measurement of outcome-orientated quality indicators for care homes requires both the perspective on quality of care and quality of life. With view to this, some general issues on the possibilities and limits have to be taken into account when it comes to implementing appropriate procedures and using the results for further amelioration of processes (Schönberg, 2006):

- *There is no 'global indicator' functioning as a 'general signaller' for the quality of institutions:* Apart from the lack of causality between various dimensions of outcome, there is also no direct connection between different aspects of the quality of results. Good results in respect of one indicator (such as decubitus ulcers) do not necessarily imply good results in other areas. This is also true for QoL indicators.
- *Residents are jointly responsible for the quality outcomes:* The quality of subject-to-subject relationships (between care-giver and care recipient) influences the outcome (Bond/Thomas, 1991). In this sense, care recipients are 'co-producers' of care-giving.
- *A general assessment of quality standards by means of indicators is not possible:* In the process of quality development and quality assurance, indicators are regarded as signals, but a general quality assessment for a given institution by means of indicators is not possible (Faust, 2003; Gebert/Kneubühler, 2003; Halfon et al., 2000). However, measurement by means of quality indicators can be a starting point for an extensive quality assessment, for example, where an indicator points to a deficit. In this sense, indicators function as 'sentinel events' (Höwer, 2002: 19), whose occurrence must be explained by the institutions.
- *Outcomes based on indicators are in need of interpretation:* Outcomes of indicator measurements need to be interpreted (Donabedian, 1992, Faust, 2003, Höwer, 2002). The problem is that such outcomes "tempt" researchers to draw conclusions that are entirely unadmissible on the basis of these measurements. Thus a large number of decubitus ulcers in an institution may lead to the conclusion that a more in-depth analysis of the care-giving performance needs to be considered and/or an explanation requested from the institution. However it is not possible to draw a direct conclusion from the number of decubitus ulcers about the overall quality standard of care-giving in the institution. "Outcomes as indicators of quality care are (…) open to misrepresentation and misunderstanding by the public if multiple causation is not understood" (Donabedian, 1992: 359).
- *Technical limits of possible collection of indicators in care homes:* Summarised data indicators require the collection of individual data from care recipients, which are then aggregated at the institutional level. This, in turn, requires a routine of data collection and appropriate technical equipment, as well as an analysis and interpretation expertise.

Conclusions

The discussion about measurable outcomes and relevant indicators in healthcare and long-term care services also embraces the quality of life perspective to an increasing extent. This reflects a general trend that not only aims to study the structural and process attributes of nursing and long-term care and make them an issue for quality development, but also recognises the user aspect as an indispensable component of quality development.

It must also be pointed out, however, that indicators are essential but only a part of a comprehensive quality assessment – this is a crucial limit imposed on the collection of indicators and the expectations associated with them. Instead, they point to relevant areas and problem aspects that need to receive further attention in the course of quality development and quality management. Even if there is no mono-causal correlation between the quality of structure, processes and outcomes, so that indicators of quality in outcome do not permit conclusions concerning the quality levels of structure and processes, they do provide relevant information. Furthermore, the residents themselves are partly responsible for the quality of care-giving outcomes, so that indicators may be used to measure outcomes for institutions for which the institutions themselves are only partly responsible.

However on the other hand, the use of indicators offers a number of opportunities that can be summarised in terms of

- establishing transparency,
- establishing a basis for scientific research on long-term care,
- a possibility for institutional benchmarking,
- a possibility for driving quality development in institutions.

Even if the interest in using indicators to measure and examine the quality of outcomes has risen sharply in European countries lately in particular for in-patient healthcare in comparison with the United States, the debate on empirically sound, reliable quality indicators reached Europe late in the day and, as shown by the focus of the main quality initiatives, seems to be still of secondary importance. The search for and exploration of indicators for the quality of outcomes in care homes is a topic that has by no means received the attention it deserves, last but not least from the perspective of users and in the interest of ensuring long-term care that is compatible with human dignity. Yet indicators are an important way of measuring quality from the user perspective and making it available for the quality development of services and institutions. Alone they cannot guarantee quality but are part of an overarching context of effectiveness and efficiency of services in long-term care.

Section 4: List of result-oriented performance indicators by domain

The selection of result-oriented performance indicators focuses on five domains that are relevant for care homes. Reflecting upon results requires consideration for the different perspectives of stakeholders involved: residents, family and friends, staff, management, funders as well as other social groups and the legislator.

Domains	Perspectives[1]	Indicators
1 Quality of care	Residents, staff	1-24
2 Quality of life	Residents, family, friends, staff	25-70
3 Leadership	Management, staff	71-87
4 Economic performance	Management, funder	88-91
5 Context	Funder, legislator, suppliers, general public	92-94

Each indicator will be presented following a common terminology and based on the following scheme:

Definition	Definition of the indicator
Operationalisation	Practical issues concerning the application or the type of data collection needed
Calculation/ Formula	Measures, definition of values in the numerator and the denominator of the indicator
Use/Purpose	Use and rationale of the indicator in measuring, assessing and improving the quality of results in care homes. General comments concerning national context, if appropriate.
Perspective	From which stakeholder perspective is the indicator particularly relevant?
Theme	Which themes and issues pertinent to care homes are addressed by the indicator?
Source	Source, quality framework or context in which the indicator is already used or from which the indicator was inspired.

[1] Generally speaking quality improvements should always target the residents of care homes; however, some indicators are addressing other stakeholder groups, e.g. staff or management, in the first place.

Domain 1: Quality of care

The indicators in this first domain are concerned with the quality of care, this being the most important aspect to all concerned. Older people move to a care home because of health problems, care needs or personal circumstances, and/or when there are no more options to remain living at home. Often these residents are dependent for their physical care on carers every day.

Carers in care homes have the primary task to care for existing health problems as well as possible and to prevent impairment and other complications.

The key focus in this domain is on the quality and safety of care. Understanding care needs, complications and adverse events is an essential part of managing the quality of care. The registration of for example decubitus ulcers, medication errors or fall incidents must be integrated in the resident's registration documentation, such as the resident record or the personal care plan. Only then can care providers and carers assess their results and steer on improvement of quality. The indicators can also be used to monitor the success of their improvement programmes and to establish priorities for further action.

The indicators in the domain 'Quality of care' are mostly described from the perspective of the residents. When using the indicators one should therefore use the information from the resident's record or personal care plan. Often a choice can be made whether to measure on a defined day (e.g. point prevalence measurement) or to maintain a continuous registration. The indicator on decubitus ulcers might be more suitable for a prevalence measurement while the indicator on fall registration is more suitable for continuous registration.

Most indicators in this domain emerged from existing quality management systems from the project's participating countries, but also from quality management systems from the United States. No indicator within this domain came from a non-participating country. As these indicators were considered to be critical in several of the countries represented in this project, some were present in more than one quality management system or guideline.

Indicators 19-24 did not emerge from existing quality management systems but from the international experts in the Delphi panel or in the E-Qalin validation workshops. In a workshop in which representatives of Delphi and E-Qalin experts as well as the PROGRESS team took part, all proposed new indicators were discussed and those finally selected were added to the existing indicators in the domain 'Quality of care'.

Indicator No 1	
Definition	Percentage of residents who suffer from decubitus ulcers stage 2-4 that began in the care home
Operationalisation	To measure this indicator an initial assessment of the decubitus status is needed at the point of admission. Pressure ulcers stage 1 are excluded due to measuring difficulties causing unreliability. This indicator is measured on a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents with decubitus ulcers stage 2-4 Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to improve strategies to prevent decubitus ulcers, mainly by regularly changing residents' positions in their beds to relieve pressure on the same skin areas. Decubitus ulcers are not only painful and debilitating, but can have a devastating long-term impact on the health and quality of life of residents.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; E-Qalin, 2009; MDS, 2009; US DHHS, 2008; CSCI, 2008

Indicator No 2	
Definition	Percentage of residents who suffer from intertrigo
Operationalisation	Intertrigo is a skin disease (especially in skin folds) with local redness and pain. Intertrigo is common for people with obesity. It is often seen under the breasts, in anal clefts and in the groins of the residents. This indicator is measured for a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents who suffer from intertrigo Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to detect the skin folds and to prevent them. Careful consideration of skin-fold causation helps in preventing the problem. The effective treatment and/or management of underlying factors, such as incontinence, should also help prevent skin fold ulcers.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; LPZ, 2009 and MDS, 2009

Indicator No 3	
Definition	Percentage of residents for whom medication errors have been reported over the past 30 days
Operationalisation	Multiple sources can be used to measure this indicator: the resident's file, the memory of the staff members/residents and formal incidence registrations, such as in the Dutch system. Medication mismanagement includes the following incidences: • A prescribed medicine has not been given, • The wrong dosage was administered, • Medication was given at the wrong time, • The residents did not take the medicine, • The wrong medicine has been given, • Inappropriate combination of medications. Do not measure with residents who take their medicine on their own (measure only with residents who get their medicine distributed by others).
Measurement/ Calculation Formula	Numerator: Number of residents for whom medication errors have been reported in the past 30 days Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to prevent medication errors. For example, over-dosage can result in harm to the resident prescribed the medication, and an under-dosage can result in less than desirable treatment outcomes. The indicator is also useful to get insight into the leadership culture of care homes: if reports of medication errors are only used to blame and punish, staff will be reluctant to report incidents in the future, rather than using them as a starting point for improving procedures and care structures.
Perspective	Staff and residents
Theme	Quality and safety of care, quality of staff
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; US DHHS, 2008 and CSCI, 2008

Indicator No 4	
Definition	Percentage of residents who have had a health check by a specialist (ophthalmologist/dentist/chiropodist/hearing specialist) periodically
Operationalisation	This indicator is usually based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents who have had a health check by a specialist at least once or twice a year Denominator: Number of residents
Use/Purpose	Even if, in a number of countries, health checks or visits at specialists cannot be influenced by care home staff it is important to facilitate and control residents' access to the health system: Older people who live in care homes should not be discriminated against in terms of access to specialist health services (cf. DoH, 2001).
Perspective	Residents
Theme	Physical health and well-being
Source	Inspired by: E-Qalin, 2009; CSCI, 2008; MDS, 2009; DoH, 2001

Indicator No 5	
Definition	Percentage of residents who had a relative weight loss in the last month that was unintended and was not agreed in the treatment plan of the resident
Operationalisation	This indicator is measured with the weight of the resident. Weight loss of more than 3kg of the total bodyweight in the last month or more than 6kg in the last six months. Do not measure with residents who: • receive terminal care or who are terminally ill, • do not want to be checked.
Measurement/ Calculation Formula	Numerator: Number of residents who had a relative weight loss in the last month that was unintended and was not agreed in the treatment plan of the resident. Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to prevent unintentional weight loss. Older residents with unintentional weight loss are at a higher risk of infection, depression and death.
Perspective	Residents
Theme	Quality and safety of care (risk management)
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; US DHHS, 2008; MDS, 2009

Indicator No 6	
Definition	Percentage of residents with dehydration symptoms
Operationalisation	A resident is dehydrated if there is an acute weight loss of more than 3% of the total body weight, or acute weight loss of more than 1 kg a day. Other symptoms, such as the condition of the skin, dry mucous membranes and dry tongue are indications, but can also be caused by other factors such as medication use. This indicator is usually based on continuous care documentation. Do not measure with residents who: • receive terminal care or who are terminally ill, • do not want to be checked.
Measurement/ Calculation Formula	Numerator: Number of residents with dehydration symptoms Denominator: Number of residents who have been assessed
Use/Purpose	Dehydration is considered to be a sentinel health event. It leads to a number of complications, e.g. disorientation, loss of appetite, loss of energy and general adynamia. In persons suffering from dementia, dehydration is one of the main causes of death, apart from malnutrition and pneumonia.
Perspective	Residents
Theme	Quality and safety of care (risk management)
Source	Inspired by: KVZ-VVT, 2007; US DHHS, 2008; Schols et al., 2009; MDS, 2009

Indicator No 7	
Definition	Percentage of residents who had a fall incident in the past 30 days
Operationalisation	Multiple sources can be used to measure this indicator: the resident's file (care documentation), the memory of the staff members/residents and the incidence reporting systems/registrations. Self-reported falls must be included. It is to be recommended to also register the place of the fall incident and its consequences for the resident.
Measurement/ Calculation Formula	Numerator: Number of residents who had a fall incident in the past 30 days. Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see how many fall incidents occur in the care home and to prevent fall incidents. Falls are a major cause of morbidity and mortality among older people.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; US DHHS, 2008; CMS – RAI, 2002; E-Qalin, 2009; MDS, 2009

Indicator No 8	
Definition	Percentage of residents who have displayed signs of challenging behaviour towards staff members and/or other residents during the past seven days
Operationalisation	The following behavioural symptoms are being measured: • Verbally challenging behaviour: resident threatens, yells or curses at other people. • Physically challenging behaviour: resident hits, pushes, scratches or intimidates other people. • Socially unacceptable behaviour: resident makes disturbing noises, is noisy, screams, maltreats him/herself, presents sexual or exhibitionistic behaviour, spreads himself with food or faeces, hoards up or noses about others' possessions. • Refusing care: resident refuses to take medication or injections, refuses food and participation in activities.
Measurement/ Calculation Formula	Numerator: Number of residents who have displayed signs of challenging behaviour towards staff members and/or other residents during the past seven days Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see how often residents display problem behaviour and to monitor how staff are able to respond to this challenge. If a tendency of increasing problem behaviour has been assessed, management and staff might think about additional training on how to cope with these residents.
Perspective	Staff and residents
Theme	Quality and safety of care, quality of staff
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT; 2010; US DHHS, 2008; CMS-RAI, 2002

Indicator No 9	
Definition	Percentage of residents who were physically restrained during the last seven days
Operationalisation	Restraining is limited to: the Swedish belt (the waist restraint belt with key lock), a deep chair from which one cannot easily stand up or a tabletop that is fixed onto the chair in front of a person to prevent someone standing up. You can measure this by observation and it should be reported in the resident's file. In most countries a judicial/medical authorisation for restraints is needed, so the indicator can be based on the respective documentation. The use of restraints (the examples given above are not a comprehensive enumeration of the restraining measures used in care homes) must be minimised as much as possible since there are many non-restraining alternatives available in long-term care.
Measurement/ Calculation Formula	Numerator: Number of residents who were physically restrained during the last seven days Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see how many residents were restrained. If this percentage is very high, maybe the residents are being restrained too soon. Restraints can add to the risk of falling. Trying to free themselves from restraints, residents end up injuring themselves more than if they had been free of the restraint. Their injuries are also more severe than if they had not been restrained in the first place. Staff are stimulated to think about alternative measures to guarantee the safety of residents.
Perspective	Residents, Staff
Theme	Quality and safety of care, quality of staff
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; US DHHS, 2008; MDS, 2009

Indicator No 10	
Definition	Percentage of residents who are incontinent of urine at least once a week
Operationalisation	Urine incontinence means: every type of unintentional urine loss. Urine retention is not incontinence. This indicator is measured for a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents who are incontinent of urine at least once a week Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see how many residents in the care home are incontinent and to prevent incontinence. Incontinence can be a symptom of urinary tract infection. Incontinence can cause shame and can decline the quality of life. In the Netherlands, 75% of residents with urinary incontinence do not know which type of the disorder they actually have as it has never been diagnosed. By paying more attention to diagnosis, more patients can be cured – or at least find their inconvenience reduced (LPZ, 2008).
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT, 2010; US DHHS, 2008

Indicator No 11	
Definition	Percentage of residents with a long-term catheter, inserted more than 14 days ago
Operationalisation	Do not measure with residents who already had a long-term catheter at the time they moved to the care home. The choice for a 14-day period is to make a difference between acute and chronic catheter use. Acute catheter use is for example indicated for residents who receive palliative care or suffer from acute pain from a hip fracture (not yet operated). This indicator is usually based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents with a long-term catheter, inserted more than 14 days ago Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see how many residents in the care home have a long-term catheter. If this percentage is very high, maybe the catheters are inserted too soon. Problems relating to the use of urinary catheters include infection, obstruction and leakage.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007; US DHHS, 2008

Indicator No 12	
Definition	Percentage of residents suffering from pain in the last 30 days
Operationalisation	The measurement of pain in care homes is a specific challenge, though several options for pain measurement (scales) are offered (for instance, Van Herk et al., 2009a; Closs et al., 2004; www.schmerzskala.de). There is a large group of residents for whom pain measurement with usual methods is impossible due to communication problems or cognitive decline. In such cases, e.g. for people suffering from dementia, the MOBID pain observation scale is suggested (Husebo et al., 2007). Asking relatives to estimate the pain of their family members, however, is not indicated (Van Herk et al., 2009b).
Measurement/ Calculation Formula	Numerator: Number of residents suffering from pain in the last 30 days Denominator: Number of residents who have been assessed
Use/Purpose	One of the main causes of insufficient pain management is the lack of systematic registration of pain. In care homes pain registration exists, for example with an easy measurement instrument such as a numerical pain scale but it is not broadly implemented. Research shows that 66% of nursing home residents experience pain (Boerlage et al., 2007). The percentage of residents with substantial pain in the last week (score > 4 on a 0-10 scale) is even higher: >75%. More than 25% of the residents from this group do NOT receive pain medication. More than 50% of them receive only medication from step 1 of the WHO analgesic scheme (paracetamol, NSAIDs). In nursing homes where a large amount of the residents experience pain, pain is often not or rarely registered. For residents with communication problems this is even worse.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: CSCI, 2008; US DHHS, 2008.

Indicator No 13	
Definition	Percentage of residents who use anti-psychotic medication
Operationalisation	Do not measure with residents who take their medicine on their own. When the resident remains responsible for his or her medication and keeps it in possession, it means the staff members do not know whether the resident takes the medication as prescribed. This indicator should be seen in conjunction with Ind. No 9 on restraints. The frequency of the prevalence measurement can vary.
Measurement/ Calculation Formula	Numerator: Number of residents who use anti-psychotic medication Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see if the percentage of residents using antipsychotic medication at a random point is too high. The other purpose of this indicator is to see if the number of residents with a diagnosed mental illness is equal to the residents who use psycho-pharmaceutical drugs.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007; KVZ-VVT 2010; US DHHS, 2008

Indicator No 14	
Definition	Percentage of residents suffering from dementia who use neuroleptics
Operationalisation	Percentage of residents suffering from dementia who have been given neuroleptics during the past week.
Measurement/ Calculation Formula	Numerator: Number of residents suffering from dementia who have been given neuroleptics during the past week. Denominator: Number of residents who have been assessed
Use/Purpose	There are many issues raised by the use of multiple medications for people suffering from dementia. The German Committee of experts for the assessment of health care development has lately pointed at the high risks connected to the use of neuroleptics which, in particular in combination with sedatives (benzodiazipines), may further reduce cognitive abilities: “Therefore the blunt prescription of sedatives for older people cannot be an acceptable strategy to compensate for the lack of health and social care staff (...) In particular the prescription of neuroleptics is to be considered critically as mortality is increased (...) a short-term application is acceptable in exceptional cases if other risks for the patient or his/her surroundings may occur” (arznei-telegramm, 2008, cit. Sachverständigenrat, 2009: 471).
Perspective	Residents
Theme	Quality and safety of care
Source	Sachverständigenrat, 2009

Indicator No 15	
Definition	Percentage of residents who use anti-depressants
Operationalisation	Do not measure with residents who take their medicine on their own. When the resident remains responsible for his or her medication and keeps it in possession, it means the staff members do not know whether the resident takes the medication as prescribed. The use of antidepressants will be considered in relation to the prevalence of depression among residents. The frequency of the prevalence measurement can vary.
Measurement/ Calculation Formula	Numerator: Number of residents who use anti-depressants Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see if the number of residents with a diagnosis of depression is equal to the residents who use antidepressants. This indicator reflects how staff cope with depressed residents or residents with another mental illness.
Perspective	Residents
Theme	Quality and safety of care
Source	KVZ-VVT, 2007

Indicator No 16	
Definition	Percentage of residents diagnosed with depressive symptoms at one point in time
Operationalisation	Based on the GDS (Geriatric Depression Scale) we propose to ask the resident how he/she has been feeling during the past week including today. The GDS was first developed in 1982 by J.A. Yesavage and others (Brink/Yesavage, 1982; Yesavage et al., 1982). As a validated instrument it has become a golden standard worldwide: http://www.stanford.edu/~yesavage/GDS.html (GDS in all languages) or http://www.stanford.edu/~yesavage/Testing.htm (short version in English, with scoring). The GDS is one technique; however, there may be others which can be used in the care home.
Measurement/ Calculation Formula	Numerator: Number of residents diagnosed with depressive symptoms at one point in time Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to see how many residents show signs of a depression. It is very important to detect the signs of a depression, diagnose a depression and start a therapy.
Perspective	Residents
Theme	Quality and safety of care
Source	Inspired by: KVZ-VVT, 2007 & 2010; US DHHS, 2008; CMS-RAI, 2002

Indicator No 17	
Definition	Percentage of residents with deficits in their mouth and teeth status
Operationalisation	Examination of mouth problems (oral mucosa, teeth and denture). Residents with a reduced self-care capacity often have mutations in their oral cavity. Those at risk are: • Residents who have dysfunctions in chewing or swallowing: their intake of certain drugs (e.g. antidepressives, antihypertonika) that reduce saliva will also have an effect on their oral micro-flora (antibiotics, corticoids); • Residents regularly under the administration of oxygen or residents who can only breathe through their mouth and • Residents with a reduced nutritional state and dehydration. This indicator is measured for a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents with deficits in their mouth and teeth status Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to steer the quality of care for those with mouth problems. Mouth and dental care is often not given enough attention and has a great influence on the resident's well-being.
Perspective	Residents
Theme	Physical health and well-being
Source	MDS, 2009

Indicator No 18	
Definition	Percentage of residents with diagnosed care needs due to geronto-psychiatric disorders
Operationalisation	Diagnosis of a GP or specialist; recordings in the care documentation such as biography, contact with family members, individualised day-time activities etc.; care-assessments and tests. The frequency of the prevalence measurement can vary.
Measurement/ Calculation Formula	Numerator: Number of residents with recorded care needs due to geronto-psychiatric disorders Denominator: Number of residents who have been assessed
Use/Purpose	Residents suffering from cognitive impairments (especially from dementia) need a specific kind of care and attention. Hence the staff must be qualified in different skills. The care of cognitively impaired residents leads to changes at different levels of a care home: • Care-concept. • Qualification of staff. • Organisation and management of care (day and night). • Architectural impacts (inside and outside the buildings).
Perspective	Residents
Theme	Quality and safety of care
Source	MDS, 2009

Indicator No 19	
Definition	Percentage of residents who are satisfied with their personal care
Operationalisation	Satisfaction surveys with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Percentage of residents who state that they are satisfied with their personal care Denominator: Number of residents who have been surveyed
Use/Purpose	The purpose of this indicator is to evaluate whether the opinion of the residents about the given personal care corresponds with the results of the other quality of care indicators. By combining the 'objective' with the 'subjective' views a more holistic picture can be drawn and potential needs for improvement might be detected.
Perspective	Residents
Theme	Physical health and well-being
Source	PROGRESS, 2010

Indicator No 20	
Definition	Percentage of residents suffering from thromboses
Operationalisation	This indicator is measured on a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents suffering from thromboses Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to steer on the prevention of thromboses
Perspective	Residents
Theme	Quality and safety of care
Source	PROGRESS, 2010

Indicator No 21	
Definition	Percentage of residents with contractures
Operationalisation	This indicator is measured on a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents with contractures Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to steer the prevention of contractures.
Perspective	Residents
Theme	Quality and safety of care
Source	PROGRESS, 2010

Indicator No 22	
Definition	Percentage of permanently bed-ridden residents
Operationalisation	This indicator is measured on a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents who are bed-ridden Denominator: Number of residents who have been assessed
Use/Purpose	The purpose of this indicator is to establish how many people are bed-ridden and to improve strategies to prevent unnecessary immobility. Immobility leads to various health problems such as loss of muscle mass, constipation, incontinence, decubitus ulcers and cognitive regression.
Perspective	Residents
Theme	Quality and safety of care
Source	PROGRESS, 2010

Indicator No 23	
Definition	Percentage of residents with enteral tube feeding (PEG-tube)
Operationalisation	This indicator is measured on a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents with enteral tube feeding (PEG-tube) Denominator: Number of residents
Use/Purpose	Many residents with advanced stages of cognitive decline and/or swallowing problems are at risk of malnutrition. They may benefit in such cases from tube feeding. In prolonged situations enteral tube feeding is in many cases a preferred choice compared to tube feeding by the nose. For residents enteral tube feeding is less burdensome and the risk of complications is lower. On the other hand, this indicator can be used to check whether tube feeding (in case of an increasing trend) is used too often and too quickly in order to save working time (tube feeding is faster than hand-feeding a resident individually).
Perspective	Residents
Theme	Quality and safety of care
Source	PROGRESS, 2010

Indicator No 24	
Definition	Percentage of residents with an assessment of abilities to eat independently and/or related risks
Operationalisation	This indicator is measured on a defined day once a year as a prevalence measure. Alternatively, it can be based on continuous care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents who are assessed Denominator: Number of residents
Use/Purpose	It is important to check every resident if he/she is able to feed himself alone; if not then this indicator should lead to measures in the care home to ensure they are properly fed, e.g. by a PEG-tube.
Perspective	Residents
Theme	Quality and safety of care
Source	PROGRESS, 2010

Domain 2: Quality of life

Quality of life is frequently confused with quality of care. Whilst the two are often interconnected they should not be seen as the same. Quality of life may be high while quality of care is low: that is, people may feel well, satisfied with life or happy even if the care they get is poor. Conversely, people may have a high quality of care, in that it meets a number of standards, but have low quality of life. Quality of life is difficult to define as it is determined by individual preferences and these may include physical, social or psychological aspects. Universal models of quality of life may be easier to use in practice, but not reflect individual differences. It is also important to recognise that there is no evidence that quality of life for care home residents is fundamentally different to anyone else's quality of life (Gerritsen et al., 2004: 612). Nonetheless, it is important that if universal models are to be used that they are constructed with the participation, where possible, of those they are seeking to represent. Interestingly, only very few of the following quality of life indicators emerged from existing quality and inspection frameworks that are generally more focused on quality of care.

Evidence-based quality of life indicators were therefore taken from another source, which were universal indicators from research based on what residents, relatives and staff had said was important to them in terms of quality of life in care homes. The indicators emanating from these sources were written in such a way that the findings from them would be based on the subjective experience of individuals (surveys). Two of the main sources that inspired these indicators were the literature review underpinning the *My* Home Life programme (NCHR&D, 2007; www.myhomelife.org.uk) and the combined assessment of residential environments (CARE) profiles (Faulkner et al., 2006). *My* Home Life is a UK-wide initiative to promote quality of life in care homes for older people, which has the support of the Relatives and Residents Association and all the provider organisations that represent care homes across the UK as well as of two prestigious charities interested in care for older people (Age UK and the Joseph Rowntree Foundation). The evidence base for *My* Home Life was collaboratively developed by over 60 academic researchers from universities across the UK, who belonged to the National Care Home Research and Development Forum.

My Home Life (MHL) is structured around eight themes, two of which are aimed at managers to help them support their staff put the other six themes into practice. These two themes are about Transformation and include Keeping workforce fit for purpose and Promoting positive cultures. Three of the six themes aimed at staff are about the approach to care (Personalisation) and include Maintaining identity; Sharing decision-making, and Creating community. The remaining three themes (Navigation) are focused on what staff need to do to support residents and relatives through the journey of care and include Managing transitions; Improving health and healthcare; and Supporting good end of life. My Home Life is underpinned by Relationship-centred Care (Tresloni and the Pew-Fetzer Task Force, 1994) and the Senses Framework (Nolan et al., 2006), which highlights the importance of relationships between residents, relatives and staff and the need to consider what gives each a sense of security, belonging, continuity, purpose, achievement and significance. 24 indicators were constructed from the MHL literature review, one for each theme from the perspective of residents, relatives and staff.

Indicator No 25	
Definition	Percentage of residents who feel emotionally supported in managing their sense of loss
Operationalisation	This indicator is generated from an item constructed for its purpose on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling emotionally supported Denominator: Total number of residents surveyed
Use/Purpose	A number of sources of loss can occur for residents in care homes including moving from one's home, reducing social networks, increasing frailty, and approaching end of life. Residents can be supported to manage these transitions when they have access to information regarding their care and are encouraged to maintain ownership over care decisions. When residents are emotionally supported so that they can effectively manage episodes of loss, an improved quality of life can result. This indicator allows monitoring of emotional support. Effort should be made to ask all residents adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Managing loss
Source	Inspired by NCHR&D Forum, 2007

Indicator No 26	
Definition	Percentage of relatives/friends who feel emotionally supported
Operationalisation	This indicator is generated as an item constructed for its purpose on annual satisfaction surveys or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling emotionally supported Denominator: Total number of relatives/friends surveyed
Use/Purpose	In addition to residents, it is important that relatives/friends have a feeling of emotional support from care home staff. Relatives/friends often deal with their own sense of loss for themselves, and on behalf of their loved one. Relatives/friends can often feel guilty for placing their loved one in a care home. Emotional support can help ease the burden on relatives/friends and improve family involvement in care delivery. This indicator can give information regarding whether staff are effectively supporting relatives/friends.
Perspective	Relatives/friends
Theme	Quality of life, Managing loss
Source	NCHR&D Forum, 2007

Indicator No 27	
Definition	Percentage of staff who feel emotionally supported in dealing with constant loss and bereavement at work
Operationalisation	This indicator is generated as an item constructed for its purpose on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling emotionally supported Denominator: Total number of staff surveyed
Use/Purpose	Staff can experience loss and bereavement during employment, particularly when faced with resident death. Staff require support to deal with feelings of loss and bereavement. This support can help improve the quality of life for staff and keep the workforce fit for purpose. This indicator will assist in gauging how effectively staff are supported to deal with loss.
Perspective	Staff
Theme	Quality of life, Managing loss
Source	NCHR&D Forum, 2007

Indicator No 28	
Definition	Percentage of residents who feel staff in their unit know their life story
Operationalisation	This indicator is generated as an item constructed for its purpose on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling staff know their life story Denominator: Total number of residents surveyed
Use/Purpose	The capacity to get to know resident life stories is enhanced by consistent assignment of staff to residents. Having staff know and understand residents' life stories is critical for maintaining resident identity. Residents who are able to maintain their identity have more positive experiences that can improve quality of life. Effort should be made to ask all residents adapting questions for individuals with cognitive impairment.
Perspective	Resident
Theme	Quality of life, Maintaining identity
Source	NCHR&D Forum, 2007

Indicator No 29	
Definition	Percentage of relatives/friends who feel staff know who they are
Operationalisation	This indicator is generated from an item constructed for its purpose on annual satisfaction surveys or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling staff know who they are Denominator: Total number of relatives/friends surveyed
Use/Purpose	Relatives/friends who feel staff know who they are as a person experience an improved sense of community in the care home. This sense of community ensures relatives/friends feel that they will be trusted as valuable sources of information about their loved one. Feeling like part of a community results in shared understandings that can reduce negative feelings between staff and relatives/friends about care. This indicator monitors how well staff know relatives/friends as persons.
Perspective	Relatives/friends
Theme	Quality of life, Creating community
Source	NCHR&D Forum, 2007

Indicator No 30	
Definition	Percentage of staff who feel their personal skills and abilities are recognised by colleagues
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling like their skills and abilities are recognised Denominator: Total number of staff surveyed
Use/Purpose	Staff who are recognised for their skills and abilities to provide care, can experience a sense of empowerment and value. Care worker duties are often difficult, yet care workers continue to do their jobs because they have a deep sense of commitment to helping others. When staff are recognised for what they have done, it validates their hard work and can keep the workforce fit for purpose leading staff to have stronger desire to stay in their position. This indicator monitors staff recognition.
Perspective	Staff
Theme	Quality of life, Recognising worker contribution
Source	NCHR&D Forum, 2007

Indicator No 31	
Definition	Percentage of relatives/friends who feel welcomed in the care home
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with relatives/friends
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling welcomed Denominator: Total number of relatives/friends surveyed
Use/Purpose	Development of relationships is critical to ensuring creation of community in the care home. A sense of community can bring about shared understandings and feelings of value. Feeling welcome in a care home can be supported by the environment where spaces facilitate a sense of belonging. This sense can improve relative/friend satisfaction with care. This indicator monitors how well community has been created.
Perspective	Relatives/friends
Theme	Quality of life, Creating community
Source	NCHR&D Forum, 2007

Indicator No 32	
Definition	Percentage of residents, relatives and staff who feel the care home is part of their local community
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys with residents, relatives/friends, and staff.
Measurement/ Calculation Formula	Numerator: Number of residents, relatives/friends, or staff feeling part of local community Denominator: Total number of residents, relatives/friends, or staff surveyed
Use/Purpose	Care homes that are a part of a larger community have access to resources that can improve care. Furthermore, this larger community can allow residents to remain connected to their prior relationships and activities thereby improving feelings of loss residents and relatives/friends may have when placement in a care home occurs. This indicator monitors the sense of connection to the local community.
Perspective	Residents, relatives/friends and staff
Theme	Quality of life, Creating community
Source	NCHR&D Forum, 2007

Indicator No 33	
Definition	The percentage of decisions implemented by the leadership of the care home based on decisions made by the residents' council
Operationalisation	This indicator is generated by careful review of resident council and other facility documents that describe leadership decisions.
Measurement/ Calculation Formula	Numerator: Number of resident council suggestions implemented Denominator: Total number of resident council suggestions for facility change
Use/Purpose	Participation in decisions which concern the arrangement of living conditions in care homes in central aspects (e.g. housing, recreational activities, order of the care homes) is part of equitable participation in social life. General conditions of democratic participation and co-determination of residents are addressed by this indicator. The facility will have to agree on how to define whether a decision has been made based on resident council input.
Perspective	Residents
Theme	Quality of life, Participation
Source	Inspired by CSCI, 2008; NRW Act of housing and participation (WTG); BMFSFJ, 2009 (German Charter of Rights for people in need of care)

Indicator No 34	
Definition	Percentage of residents who feel their own rights are acknowledged and acted on
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling their rights are acknowledged Denominator: Total number of residents surveyed
Use/Purpose	Sharing decision-making is key to quality of life in care homes and is addressed with this indicator. Residents, including those with cognitive impairment, can be included in aspects of daily care decisions through a process of negotiation which balances resident rights and risks. Including residents in decision-making enhances the sense of control residents have over daily life, thereby improving their quality of life. Effort should be made to ask all residents adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Shared decision-making
Source	NCHR&D Forum, 2007

Indicator No 35	
Definition	Percentage of relatives/friends who feel involved in decision-making about their resident's care
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with relatives/friends
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling involved Denominator: Total number of residents surveyed
Use/Purpose	Relatives/friends have repeatedly identified the need to share decision-making by participating in resident care decisions. This involvement may improve resident-relative-staff communication and interaction thereby enhancing resident quality of life. This indicator monitors relative/friend involvement.
Perspective	Relatives/Friends
Theme	Quality of life, Sharing decision-making, Sense of purpose
Source	Faulkner et al. 2006

Indicator No 36	
Definition	Percentage of staff who feel that they can take informed risks in caring for residents
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling they can take informed risks Denominator: Total number of staff surveyed
Use/Purpose	Staff who wish to be innovative and creative in meeting resident needs and preferences, require the ability to take informed risks while delivering care. The resultant feeling of empowerment over work decisions can improve staff morale and lower turnover, keeping workforce fit for purpose. This indicator monitors staff capacity to make decisions about work and care.
Perspective	Staff
Theme	Quality of life, Shared decision-making
Source	NCHR&D Forum, 2007

Indicator No 37	
Definition	Percentage of residents who feel their health is promoted to optimise their quality of life
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling their health is optimised Denominator: Total number of residents surveyed
Use/Purpose	This indicator highlights the importance of ensuring adequate access to healthcare services – both those general in nature and specialist services as required – and promoting health to optimise resident quality of life. Health can be promoted when the resident is engaged in meaningful activities such as socialising and learning. Health is fundamental to quality of life and, without health, quality of life is unlikely to be achieved. Effort should be made to ask all residents adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Health promotion
Source	NCHR&D Forum, 2007

Indicator No 38	
Definition	Percentage of relatives/friends who feel their resident has adequate access to healthcare services
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling their resident has access to healthcare Denominator: Total number of relatives/friends surveyed
Use/Purpose	This indicator gives an alternative perspective on the ability of residents to receive necessary healthcare services that can improve overall functioning and health ultimately enhancing quality of life.
Perspective	Relatives/friends
Theme	Quality of life, Health promotion
Source	NCHR&D Forum, 2007

Indicator No 39	
Definition	Percentage of staff who feel their own health (physical health and well-being) is valued at work
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling their own health is valued Denominator: Total number of staff surveyed
Use/Purpose	Attention to staff physical and mental well-being can enhance staff's feeling of importance and value. Support for the social needs of staff at work such as the relationships staff form with each other, and with their supervisor in particular, has been repeatedly identified as critical in staff satisfaction with their jobs. This may help reduce turnover of staff and keep workforce fit for purpose. This indicator monitors staff health and well-being.
Perspective	Staff
Theme	Quality of life, Health promotion
Source	NCHR&D Forum, 2007

Indicator No 40	
Definition	Percentage of residents who feel able to talk about death and dying with staff, when they wish so
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling they can talk about death and dying Denominator: Total number of residents surveyed
Use/Purpose	Care homes are complex systems where people are both living and dying. There is a need to develop a culture of care which equally values older people's dying as well as their living. Relationship-centred care, with the emphasis on personal need and dignity, can provide a foundation through which residents are supported in discussing death and dying. These discussions can improve the likelihood that residents experience their death according to their wishes. This indicator monitors resident comfort with discussion of death and dying. Effort should be made to ask all residents adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Dying and end-of-life care
Source	NCHR&D Forum, 2007

Indicator No 41	
Definition	Percentage of relatives/friends who have discussed with staff end-of-life care plans for their resident
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends who have discussed end-of-life with staff Denominator: Total number of relatives/friends surveyed
Use/Purpose	Including relatives/friends in discussions about resident death is important to encourage common understanding of both relatives/friends and resident wishes and preferences regarding death and dying. Shared understanding can improve the experience of dying and death for relatives/friends in ways that can provide closure and feelings of acceptance. This indicator addresses inclusion of relatives/friends in discussions of end-of-life.
Perspective	Relatives/friends
Theme	Quality of life, End-of-life care
Source	NCHR&D Forum, 2007

Indicator No 42	
Definition	Percentage of staff who feel emotionally supported when residents die
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling emotionally supported when residents die Denominator: Total number of staff surveyed
Use/Purpose	In addition to relatives/friends, the staff often feel a sense of deep loss when residents die because of the close nature of the work staff engage in with residents, as well as the relationships they form with residents. It is common for staff to require support after a death, for example in forms of open discussion, funeral attendance, or memorial services. Support during the grieving process can enhance staff's ability to reach acceptance and closure. This indicator monitors emotional support of staff.
Perspective	Staff
Theme	Quality of life, End-of-life
Source	NCHR&D Forum, 2007

Indicator No 43	
Definition	Percentage of residents who feel there are not enough staff available to meet their needs
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives
Measurement/ Calculation Formula	Numerator: Number of residents feeling that there are not enough staff available Denominator: Total number of residents surveyed
Use/Purpose	This indicator addresses having adequate, properly trained staff to meet resident needs. A feeling that there is insufficient staff available can occur as a result of insufficient numbers of staff as well as insufficient education or training, particularly in understanding and meeting needs of residents. Staff who have training in relationship-centred care and are consistently assigned to the same residents, for example, may be able to adequately address resident needs because staff will have crucial knowledge of resident wishes and routines. A feeling that there is enough staff can facilitate resident feelings of worth and importance as individuals and improve quality of life. Effort should be made to survey all residents adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life
Source	NCHR&D Forum, 2007

Indicator No 44	
Definition	Percentage of relatives/friends who feel staff are competent to care for their resident
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling staff are competent Denominator: Total number of relatives/friends surveyed
Use/Purpose	Relatives/friends often desire to maintain some care-taking duties when residents are placed in nursing homes. Relatives/friends are often unsure what their role in caring for residents can be after placement. Negotiations of care tasks among staff and relatives/friends are important for relative/friend satisfaction with care placement and ongoing care. This may require education or training not just for staff, but for relatives/friends as well.
Perspective	Relatives/friends
Theme	Quality of life, Relative/friend involvement in care
Source	NCHR&D Forum, 2007

Indicator No 45	
Definition	Percentage of staff who feel their training needs are met to care for residents
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling their training needs are met Denominator: Total number of staff surveyed
Use/Purpose	Care for older adults and persons with dementia can require specialised knowledge. Many care home workers are lacking in education and training to meet the needs of an increasingly complex population of individuals in care homes. Education, accompanied by practical guidance and support in transferring knowledge is critical for ensuring desirable staff practices. This indicator can help gauge whether staff feel they are adequately prepared for their duties.
Perspective	Staff
Theme	Quality of life, Staff education & training
Source	NCHR&D Forum, 2007

Indicator No 46	
Definition	Percentage of residents who feel there is a positive atmosphere in the care home
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling there is a positive atmosphere Denominator: Total number of residents surveyed
Use/Purpose	A positive atmosphere in the care home can be facilitated by strong leadership and management and is an atmosphere wherein staff, residents, and relatives/friends are continually able to adapt to meet changing needs and improve care practices. A positive atmosphere fosters positive experiences for residents that contribute to enhanced quality of life. This indicator monitors how residents feel about the care home atmosphere. Effort should be made to survey all residents adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Organisational atmosphere
Source	NCHR&D Forum, 2007

Indicator No 47	
Definition	Percentage of relatives/friends who feel their suggestions for improvement are welcomed by staff
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling their suggestions are welcomed Denominator: Total number of relatives/friends surveyed
Use/Purpose	In a positive atmosphere, the knowledge of every individual is valued. Relatives/friends are considered part of the 'team' for quality improvement. Relatives/friends often have valuable insights into care delivery and can offer creative solutions to concerns about care delivery. Welcoming relative/friend suggestions can create a sense of partnership and shared meaning regarding care home practices which will facilitate feelings of satisfaction with care and quality of life. This indicator monitors inclusion of relatives/friends in the team.
Perspective	Relatives/friends
Theme	Quality of life, Relatives' and friends' involvement in care
Source	NCHR&D Forum, 2007

Indicator No 48	
Definition	Percentage of residents who feel safe, protected and secure in the care home
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #1), or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling safe and secure Denominator: Total number of residents surveyed
Use/Purpose	Feeling safe, protected, and secure has been identified as a positive event by residents in care homes. Feeling safe can lead to a sense of security, which can improve quality of life for residents. This indicator monitors this sense. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Sense of security
Source	Faulkner et al., 2006

Indicator No 49	
Definition	Percentage of residents who feel staff are friendly to them
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #3), or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling staff are friendly Denominator: Total number of residents surveyed
Use/Purpose	Feeling staff are friendly to residents has been identified as a positive event by residents in care homes. Being received by staff in a friendly manner can lead to a sense of belonging, which can improve quality of life for residents. This indicator monitors this sense. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Sense of belonging
Source	Faulkner et al., 2006

Indicator No 50	
Definition	Percentage of residents who feel they can have visitors whenever they like
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #5), or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling they can have visitors Denominator: Total number of residents surveyed
Use/Purpose	Feeling they can have visitors whenever they like has been identified as a positive event by residents in care homes. Having visitors can lead to a sense of continuity, which can improve quality of life for residents. This indicator monitors this sense. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment. This indicator might not be relevant in care homes where visitors can enter the care home at any time.
Perspective	Residents
Theme	Quality of life, Sense of continuity
Source	Faulkner et al., 2006

Indicator No 51	
Definition	Percentage of residents who feel staff encourage them to help themselves
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #25), or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling staff encourage them Denominator: Total number of residents surveyed
Use/Purpose	Encouraging residents to help themselves allows residents to maintain abilities and have a sense of purpose in life by reducing the reliance on staff for all aspects of care. A sense of purpose can bring meaning to life in the care home and improve quality of life. This indicator monitors this sense. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Sense of purpose
Source	Faulkner et al., 2006

Indicator No 52	
Definition	Percentage of residents who feel staff give them time to do things on their own
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #18), or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling staff give them time Denominator: Total number of residents surveyed
Use/Purpose	Feeling staff give them time to do things on their own has been identified as a positive event by residents in care homes. Residents who are given the time and opportunity to do things on their own have a sense of achievement which can give meaning to life and improve its quality. This indicator monitors this sense. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Sense of achievement
Source	Faulkner et al., 2006

Indicator No 53	
Definition	Percentage of residents who feel staff respect their personal belongings
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #20), or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling staff respect their belongings Denominator: Total number of residents surveyed
Use/Purpose	Respect for personal belongings has been identified by residents as a positive event. This respect can give residents a sense of significance as a person. When residents feel that they, and by extension, their belongings have significance, they have an enhanced quality of life. This indicator monitors this sense. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Residents
Theme	Quality of life, Sense of significance
Source	Faulkner et al., 2006

Indicator No 54	
Definition	Percentage of staff who feel residents' families appear to trust them.
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with staff.
Measurement/ Calculation Formula	Numerator: Number of staff feeling families trust them Denominator: Total number of staff surveyed
Use/Purpose	Staff that feel family trusts them and their capacity to care for residents have a sense of achievement that may improve their satisfaction with work. This indicator monitors this sense.
Perspective	Staff
Theme	Quality of life, Sense of achievement
Source	Faulkner et al., 2006

Indicator No 55	
Definition	Percentage of relatives/friends who feel staff respond quickly when their relative asks for help.
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #19) or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling staff respond quickly Denominator: Total number of relatives/friends surveyed
Use/Purpose	Feeling staff respond quickly has been identified as a positive event by relatives/friends in care homes. A quick response for help can help relatives/friends have a sense of security which is key to relative/friend quality of life in care homes. This indicator monitors this sense.
Perspective	Relatives/Friends
Theme	Quality of life, Sense of security
Source	Faulkner et al., 2006

Indicator No 56	
Definition	Percentage of relatives/friends who feel their resident seems happy in the home
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #7), or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling their resident is happy Denominator: Total number of relatives/friends surveyed
Use/Purpose	Feeling their resident seems happy in the care home has been identified as a positive event by relatives/friends in care homes. When their resident seems happy, relatives/friends have a sense of belonging that is key to their quality of life in care homes. This indicator monitors this sense
Perspective	Relatives/Friends
Theme	Quality of life, Sense of belonging
Source	Faulkner et al., 2006

Indicator No 57	
Definition	Percentage of relatives/friends who feel the home smells pleasant
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #1), or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feel the home smells pleasant Denominator: Total number of relatives/friends surveyed
Use/Purpose	Feeling like the home smells pleasant has been endorsed by relatives/friends as an item of particular importance that reflects a positive event in the care home and may be able to improve their satisfaction with care. This indicator monitors relative/friend satisfaction with the physical environment of the care home.
Perspective	Relatives/Friends
Theme	Quality of life, Satisfaction with care
Source	Faulkner et al., 2006

Indicator No 58	
Definition	Percentage of relatives/friends who feel they are involved in decisions about their resident's care
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #2), or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling they are involved Denominator: Total number of relatives/friends surveyed
Use/Purpose	Relatives/friends have identified being involved in care decisions as a positive event that can improve satisfaction and enjoyment with care. Being involved can also foster a sense of purpose for relatives/friends. This indicator monitors this sense.
Perspective	Relatives/Friends
Theme	Quality of life, Relatives' and friends' involvement in care
Source	Faulkner et al., 2006

Indicator No 59	
Definition	Percentage of relatives/friends who feel staff appreciate their input to their resident's care
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #16), or qualitative interviews with relatives/friends.
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling staff appreciate their input Denominator: Total number of relatives/friends surveyed
Use/Purpose	Having a feeling that staff appreciate the input from relatives/friends in care homes is a positive event that can improve satisfaction and enjoyment with care. Having input can also give relatives/friends a meaningful sense of achievement. This indicator monitors relative/friend sense of achievement.
Perspective	Relatives/Friends
Theme	Quality of life, Sense of achievement
Source	Inspired by Faulkner et al., 2006

Indicator No 60	
Definition	Percentage of relatives/friends who feel they are kept up-to-date with changes affecting their resident.
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys, CARE profiles (item #15), or qualitative interviews with relatives/friends
Measurement/ Calculation Formula	Numerator: Number of relatives/friends feeling they are kept up-to-date Denominator: Total number of relatives/friends surveyed
Use/Purpose	Feeling kept up-to-date regarding changes affecting relative/friend residents is a positive event that can influence satisfaction and enjoyment with care. Being kept up-to-date can also give relatives/friends a sense of significance. This indicator monitors relative/friend sense of significance.
Perspective	Relatives/Friends
Theme	Quality of life, Sense of significance
Source	Inspired by Faulkner et al., 2006

Indicator No 61	
Definition	Number of joint initiatives that engage positively residents, relatives and staff with the external community in the last year
Operationalisation	This indicator is generated through tracking of attendance of events/initiatives.
Measurement/ Calculation Formula	Number of joint initiatives in the last year
Use/Purpose	This is an indicator of support provided to assist residents to develop and maintain relationships with people outside the care home. Maintaining relationships with family and friends facilitates a sense of belonging and significance for residents. Links with, and engagement in community events can promote a sense of purpose.
Perspective	Resident, relative/friend, staff
Theme	Quality of life, Community connections
Source	Inspired by CSCI, 2008; E-Qalin, 2009; MAGS NRW, 2006

Indicator No 62	
Definition	Percentage of resident voluntary participation in organised social activities during a chosen period
Operationalisation	This indicator is generated through tracking records of attendance of events/initiatives.
Measurement/ Calculation Formula	Numerator: Number of times residents participate in social activities Denominator: Total number of activities offered/organized
Use/Purpose	This is an indicator of support provided to assist residents to develop and maintain relationships with people within the care home. Creating relationships within the care home can facilitate a sense of belonging and significance for residents. Links with, and engagement in events, can also promote a sense of purpose. This indicator monitors resident social involvement.
Perspective	Resident
Theme	Quality of life, Social activities
Source	Inspired by CSCI, 2008; E-Qalin, 2009

Indicator No 63	
Definition	Percentage of residents who feel their privacy is adequately protected
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling their privacy is protected Denominator: Total number of residents surveyed
Use/Purpose	Studies of consumer preference have shown that the possibilities and degree of experiencing privacy and intimacy are very important for the individual perception of autonomy and quality of life. The individual control over private interaction plays a significant role in this context. This indicator monitors resident comfort with privacy levels.
Perspective	Residents
Theme	Quality of life
Source	Inspired by E-Qalin, 2009; Kane, 2003; CSCI, 2008

Indicator No 64	
Definition	Percentage of relatives with whom at least two meetings to review care were carried out per year
Operationalisation	This indicator is generated through tracking of the number of appraisal interviews for each resident with at least one relative or an advocate.
Measurement/ Calculation Formula	Numerator: Number of residents whose care has been reviewed at least twice per year by means of an appraisal interview with a relative or advocate Denominator: Number of residents with at least one relative or advocate
Use/Purpose	Meetings with relatives to review care (appraisal interviews) should address issues concerning the past period such as satisfaction of family members, their perception of care, the development of their relative living in the facility, background information or biography, complaints etc. Secondly, proposals and plans for the upcoming period should cover special needs that should be satisfied including both quality of care and quality of life, plans and intentions of staff etc. Residents without relatives should be allocated an advocate. This indicator monitors amount of resident care review.
Perspective	Relatives/friends, Residents
Theme	Quality of life, Involvement of relatives/friends in care
Source	Inspired by E-Qalin, 2009; CSCI, 2008

Indicator No 65	
Definition	Percentage of residents (and their relatives) with a defined key worker
Operationalisation	This indicator is generated by careful review of the care plan documentation and/or an item, constructed for its purpose, on annual satisfaction surveys with residents and relatives.
Measurement/ Calculation Formula	Numerator: Number of residents with a defined key worker Denominator: Number of residents
Use/Purpose	Positive experience has been reported with defined key workers who serve as a reference for residents, in particular those suffering from dementia and cognitive impairment, and their relatives. If assigned to act as a defined contact person to a number of residents, health and social care staff are enabled to build a better relationship with residents, to increase knowledge on their biographical background and to develop respective interventions. This indicator assesses the degree of key worker assignment which, in some countries, has become a mandatory standard.
Perspective	Residents, staff
Theme	Quality of care, Quality of life
Source	Magee et al., 2008; Lind, 2000

Indicator No 66	
Definition	Percentage of residents who received professional end-of-life care in the last year
Operationalisation	This indicator is produced through careful review of care documentation.
Measurement/ Calculation Formula	Numerator: Number of residents receiving professional end-of-life care Denominator: Number of residents
Use/Purpose	An adequate end-of-life care belongs to the most important tasks in care homes and facilities have to offer an adequate framework for the organisation of the dying process, including the support of relatives. The purpose of the indicator is to monitor the process of dying with a focus on the residents, relatives and including religious, cultural and medical needs, such as adequate palliative care.
Perspective	Residents
Theme	Quality of life
Source	Inspired by Reference Models 3, Quality Standards for Residential Care, V 1.0 and the CSCI, 2008

Indicator No 67	
Definition	Percentage of residents whose cultural needs and preferences are met
Operationalisation	This indicator is generated as an item on annual satisfaction surveys with residents and/or resident records including dietary requirements.
Measurement/ Calculation Formula	Numerator: Number of residents having their cultural preferences met Denominator: Number of residents
Use/Purpose	This indicator addresses whether staff have been adequately prepared to meet the religious, spiritual and dietary needs of different ethnic groups and determines whether residents and families have the opportunity to participate fully in the assessment process and development of care plans. The indicator might be more pertinent in some countries than in others.
Perspective	Residents
Theme	Quality of life, Social activities
Source	Inspired by CSCI, 2008

Indicator No 68	
Definition	Percentage of residents who have an up-to-date end-of-life care plan that is consistent with their preferences
Operationalisation	This indicator is generated by collection of data from care documentation, which should include Advance Care Planning directives from the resident as well as choice of place of death.
Measurement/ Calculation Formula	Numerator: Number of residents with an up-to-date care plan Denominator: Number of residents
Use/Purpose	The indicator helps to monitor the degree of individualisation offered by the care home. Management and staff are required to define objectives, to compare these with actual results, to reflect on the general tendency and to elaborate on change to reach defined objectives.
Perspective	Residents
Theme	Quality of life
Source	Inspired by E-Qalin, 2009; CSCI, 2008; MDS, 2009; DoH, 2008

Indicator No 69	
Definition	Percentage of residents who are satisfied about the taste and quality of the meals
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents satisfied with meals Denominator: Total number of residents surveyed
Use/Purpose	Meals are an important social event. Meals represent values and culture that were engaged in with relatives/friends before care home placement. Enjoying the taste and quality of meals can improve quality of life. This indicator monitors resident satisfaction with meals. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Resident
Theme	Quality of life, Food
Source	Inspired by Kane, 2003

Indicator No 70	
Definition	Percentage of residents who feel they have sufficient control over their daily living
Operationalisation	This indicator is generated as an item, constructed for its purpose, on annual satisfaction surveys or qualitative interviews with residents and/or their representatives.
Measurement/ Calculation Formula	Numerator: Number of residents feeling they have control Denominator: Total number of residents surveyed
Use/Purpose	Having control over daily life can enhance resident quality of life. Ways residents may have control over their daily life include areas of care surrounding wake/sleep cycles, dining, bathing, etc. This indicator monitors resident access to control. Effort should be made to survey all residents, adapting questions for individuals with cognitive impairment.
Perspective	Resident
Theme	Quality of life, Autonomy
Source	Inspired by Kane, 2003

Domain 3: Leadership

Managing care homes is a complex task that, in the context of social and health care policies, calls for skills that reach on a general level from partnership working, effective contracting, engagement with communities, users and carers and a continued focus on performance and outcomes to innovation and enthusiasm for service delivery. These demands suggest a move away from traditional hierarchical leadership to networking approaches and participative ways of steering and controlling. On a personal and organisational level, such approaches have to be complemented by an internal dialogue, team-working, empowerment and employee well-being.

Care homes are characterised by management, staff, residents and other stakeholders working and living together 24 hours a day, 7 days a week and 365 days per year. This specificity calls for a participative organisational culture that works for, with and towards the well-being of the residents, while taking into account the needs and expectations of staff, families and friends as well as public purchasers or suppliers.

The indicators gathered in the domain 'leadership' are therefore, on the one hand, combining results from satisfaction surveys with staff, families, friends and/or advocates of residents to monitor 'subjective' views in relation to the organisational 'climate' and the satisfaction of families with the results of care. On the other hand, quantitative and more 'objective' indicators were identified to control:

- for the degree of compliance to mutually agreed or externally defined standards, e.g. in relation to defined individual care plans;
- for bottlenecks and potential strains on staff, e.g. by overtime work or extended absence due to sickness; and
- for preventing shortcomings, e.g. by combining the needs structure of residents with actual data on further training on dealing with residents suffering from dementia.

Choosing key indicators to assess, discuss and improve results of management performance is a management task that requires openness and transparency towards collaborators and external partners. It is up to the management to decide on the scope of transparency, but their choice and their extent itself will always be an indicator for the type of leadership to be encountered in a specific care home, for the organisational 'climate' in that care home as well as for the credibility and reputation of its managers.

Indicator No 71	
Definition	Percentage of complaints by stakeholders that have been adequately addressed in the framework of a complaints management system
Operationalisation	For this indicator it is most important to agree upon a definition of 'adequately addressed' within the complaints management procedure. Furthermore, a member of the management staff should be specified as responsible to gather individual complaints, to initiate respective measures and to document them.
Measurement/ Calculation Formula	Numerator: Number of adequately addressed complaints Denominator: Number of all complaints
Use/Purpose	This indicator has a double value as it may be interpreted both from a resident's and from a management perspective. Discussion of residents' problems helps care homes identify and understand problems and ways to improve their quality, by providing information about the experience of the various stakeholders (residents, staff, and relatives).
Perspective	Management, Residents
Theme	Complaints management, improvement
Source	E-Qalin, 2009; NRW Act of housing and participation (§ 8 WTG)

Indicator No 72	
Definition	Percentage of residents who have had defined care plans that are regularly updated and evaluated with specific measures according to their individual needs
Operationalisation	Data gathered in care documentation. Regarding the assessment of care needs, this should also be checked for updates and it should be defined within which period of time the care plan has to be defined following admission and within which period updates are due.
Measurement/ Calculation Formula	Numerator: Number of residents with defined care plans according to their needs Denominator: Number of all residents
Use/Purpose	This indicator might not be useful in countries where legal standards prescribe that individual care plans have to be defined and regularly updated. However, even if the indicator has always to be at 100%, it might be helpful to monitor the degree of individualisation offered by the care home. Management and staff are required to define objectives, to compare these with actual results, to reflect on the general tendency and to elaborate on improvements to reach defined objectives during the next year, e.g. "focus on more individualised care plans by involving specialised therapists and geriatricians".
Perspective	Residents
Theme	Care process, Individualised care
Source	E-Qalin, 2009; MDS, 2009

Indicator No 73	
Definition	Ratings of family members/close friends/advocates with respect to their satisfaction with care quality
Operationalisation	Survey and ratings according to national cultures.
Measurement/ Calculation Formula	Average rating according to the defined scale (could be analysed by target group, by department etc.)
Use/Purpose	As all data on user satisfaction, this indicator also has to be assessed and interpreted with care. Management and staff are invited to carry out at least one survey per year, to set objectives (rating to be achieved), to compare defined and actual ratings, to reflect on the general tendency and to elaborate on measures to reach defined objectives during the following period, e.g. more involvement of family members, better information etc.
Perspective	Family members, friends, advocates
Theme	Satisfaction of family members
Source	E-Qalin, 2009

Indicator No 74	
Definition	Average percentage of overtime work (including non-paid hours)
Operationalisation	HRM records – average overtime hours worked by different departments (professions) as a percentage of total regular working time.
Measurement/ Calculation Formula	Numerator: Sum of the individual percentage of overtime work of each staff member (see below) Denominator: Number of staff members Individual percentage of overtime work: • Numerator: Total hours of overtime work in a year (including non-paid hours) for staff member x • Denominator: Total hours of work in a year for staff member x
Use/Purpose	This indicator must be analysed from both a staff and a management perspective. Overtime work may contribute to higher staff satisfaction (increased income) as well as indicating stress due to an intense workload. Management and staff are invited to set goals, to compare defined and actual data, to reflect on the general tendency and to elaborate on improvements to reach defined objectives during the following period, in particular by combining respective data with staff satisfaction data, sick leave or staff turnover rates.
Perspective	Staff, management
Theme	Staff satisfaction, human relations, work climate
Source	E-Qalin, 2009

Indicator No 75	
Definition	Average percentage of working time lost due to sickness of staff
Operationalisation	Records of HR department. It should be calculated as a percentage of total working time per year. It could also be calculated on a quarterly basis. Disaggregation by profession would be of added value.
Measurement/ Calculation Formula	Numerator: Sum of the individual percentage of working time loss due to sickness of each staff member (see below) Denominator: Number of staff members Individual percentage of overtime work: • Numerator: Total hours of work lost due to sickness of staff member x during the year • Denominator: Total hours of work of staff member x during the year Working time lost to sickness should also include hours/days not covered by social security sickness benefits. For instance, if there is a waiting period before benefits are given, results may be broken down by 'short-term sickness' (waiting period) and long-term absence due to sickness.
Use/Purpose	This is another classical HRM indicator focusing on staff satisfaction, though interpretations should always reflect on the general context and cultural specificities, i.e. data should be compared with general statistics (e.g. regional, national, by sector). Management and staff are invited to set goals, to compare defined and actual data, to reflect on the general tendency and to elaborate on improvements to reach defined objectives during the following period. The indicator should be combined with others such as, for instance, staff satisfaction data, staff turnover rates (see above) or data on participation in preventative or health-promoting activities.
Perspective	Staff, management
Theme	Quality of working conditions, Health/sickness
Source	E-Qalin, 2009

Indicator No 76	
Definition	Average direct financial resources available for health promotion-related training, meetings and infrastructure per staff member
Operationalisation	Financial data, accounting system. It should be calculated per year in reference to full-time equivalents, or alternatively to average direct financial resources. It can be calculated as a percentage of the total operating budget per year.
Measurement/ Calculation Formula	Numerator: Sum of financial resources spent on health promotion-related training, meetings and infrastructure during the year Denominator: Total operating budget in the year
Use/Purpose	Several initiatives have addressed issues of health promotion in hospitals over the past few years. Financial backing of health promotion is an important precondition for a development towards 'health-promoting care homes'. Management and staff are invited to assess baseline data, set objectives and monitor results in order to develop improvements.
Perspective	Staff, management
Theme	Quality of working conditions, health/sickness
Source	WHO, 2004; EUPIDH, 2001

Indicator No 77	
Definition	Percentage of staff with advanced training in dealing with dementia and cognitive decline
Operationalisation	Records. Staff who have received specific training or qualification. The advance training is meant to also include recognition of dementia in residents. Should only be applied to nurses and social workers. Could also be expressed in hours of training or as a percentage of the working time of care staff.
Measurement/ Calculation Formula	Numerator: Number of staff members (only care staff and social workers) with advance training on dementia Denominator: Number of staff members (only care staff and social workers)
Use/Purpose	Staff providing healthcare to older adults are often so focused on acute medical problems that they may miss symptoms of cognitive impairment. In its annual report for 2006, Alzheimer Europe points to the likely underestimation of the number of people with dementia due to difficulties in identifying the condition. As the percentage of residents with dementia in care homes is significantly high, proper training to recognise and manage these cases will likely become a pressing issue.
Perspective	Staff, management
Theme	Mental condition, quality of life, staff training/qualification
Source	Inspired by E-Qalin, 2009; Act of housing and participation NRW (§ 12 WTG); CSCI, 2008

Indicator No 78	
Definition	Average number of hours in formal training per staff member by profession
Operationalisation	Records; data should be able to be disaggregated by gender, profession and/or hierarchical level. Furthermore, the indicator could be refined and disaggregated by type and contents of training.
Measurement/ Calculation Formula	Numerator: Number of hours in formal training per staff member in a year (by profession) Denominator: Number of staff members (by profession)
Use/Purpose	The indicator shows to which degree the care home is able to offer further training. Management and staff are invited to identify baseline data, to set objectives, to compare defined and actual data, to reflect on the general tendency and to elaborate on measures to reach defined objectives during the following period. May be combined with retention rate, number of applicants for employment, and staff satisfaction.
Perspective	Management
Theme	Development, further education and training
Source	Inspired by E-Qalin Manual, 2009; CSCI, 2008

Indicator No 79	
Definition	Percentage of staff who agree with the statement that high standards of moving and handling are practiced in their care home
Operationalisation	Satisfaction surveys with staff.
Measurement/ Calculation Formula	Numerator: Number of staff members that agree with the statement Denominator: Number of staff members who replied to the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	Having a sense of 'security' is key to quality of life in care homes. Staff have identified this indicator as one of the most important factors for them feeling a sense of security in the care home setting. The indicator provides insight into the organisational and team climate in the care home and results might imply focused activities for improving team work and mutual trust.
Perspective	Staff and management
Theme	Quality of care, quality of life, team climate
Source	Faulkner et al., 2006

Indicator No 80	
Definition	Percentage of staff who agree with the statement that colleagues work with them as part of a team
Operationalisation	Satisfaction surveys with staff.
Measurement/ Calculation Formula	Numerator: Number of staff members who agree with the statement Denominator: Number of staff members who replied to the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	Despite the well-known benefits of positive events for subjective well-being, little is known about the nature of positive events experienced by residents, relatives and staff in care homes. This indicator is a valid item to check staff's feelings for the sense of 'belonging' to a team and to the care home as a whole. Results will imply reflections about potential measures to improve this sense of belonging and team work in general.
Perspective	Staff and management
Theme	Quality of life, team work
Source	Faulkner et al., 2006

Indicator No 81	
Definition	Percentage of staff who agree with the statement that records are kept up-to-date in their care home
Operationalisation	Satisfaction surveys with staff.
Measurement/ Calculation Formula	Numerator: Number of staff members that agree with the statement Denominator: Number of staff members who replied to the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	Having a sense of 'continuity' is key to quality of life in care homes. Staff have identified this indicator as one of the most important factors in the care home setting. If records are not kept up-to-date this might be a threat to the continuity of care. However, reflection on the results of this item has to focus on potential improvements and factors that might enable staff to comply with what should be a general professional standard, rather than blaming individual staff members and creating a climate of bureaucratic control.
Perspective	Staff and management
Theme	Quality of care, Quality of life
Source	Faulkner et al., 2006

Indicator No 82	
Definition	Percentage of staff who agree with the statement that their care home has the goal to deliver high standards of care
Operationalisation	Satisfaction surveys with staff.
Measurement/ Calculation Formula	Numerator: Number of staff members that agree with the statement Denominator: Number of staff members who replied to the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	Staff have identified this indicator as one of the most important factors for them feeling a sense of purpose in the care home setting. Reflecting on results of this item, management and staff might want to focus on potential factors that influence the delivery of high standards of care, and how these factors can be improved.
Perspective	Staff and management
Theme	Quality of care, Quality of life
Source	Faulkner et al., 2006

Indicator No 83	
Definition	Percentage of staff who agree with the statement that all grades of staff are being equally valued in their role
Operationalisation	Satisfaction surveys with staff.
Measurement/ Calculation Formula	Numerator: Number of staff members that agree with the statement Denominator: Number of staff members who replied to the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	This indicator is, similarly to the above, focusing on the individual staff member's sense of purpose in the care home setting. It shows the degree to which staff are feeling equally valued within the organisation and might hint at potential shortcomings in relation to mutual respect and the general working climate. In combination with data on fluctuation rates or absence due to illness, management and staff might want to reflect upon measures to positively influence results in order to prevent deterioration.
Perspective	Staff and management
Theme	Quality of care, quality of life
Source	Faulkner et al., 2006

Indicator No 84	
Definition	Percentage of residents/family/friends who agree with the statement that they had been provided relevant information by admission into the care home
Operationalisation	Satisfaction surveys with residents/family/friends.
Measurement/ Calculation Formula	Numerator: Number of residents/family/friends who agree with the statement Denominator: Number of residents/family/friends who answered the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	Admission into a care home is a crucial phase for residents, their family and friends. Decent information during this phase is thus important to support choices and expectations of all involved persons during this transition?. Management and staff are invited to reflect upon factors that can be influenced to improve information processes.
Perspective	Residents/family/friends, leadership
Theme	Satisfaction of residents/family/friends
Source	PROGRESS, 2010

Indicator No 85	
Definition	Percentage of staff who agree with the statement that the decisions in their care home are made based on the quality of care rather than purely on financial resources
Operationalisation	Satisfaction surveys with staff.
Measurement/ Calculation Formula	Numerator: Number of staff who agree with the statement Denominator: Number of staff members who replied to the survey Alternative: average rating (if a scale is used in the survey)
Use/Purpose	This indicator can help specify the degree to which staff are convinced that quality is an important driver of decisions in the care home. If, on the contrary, staff point out that decisions are rather made from a financial perspective, management and staff might reflect on the consequences of this tendency and develop measures for improvement, if necessary.
Perspective	Staff and management
Theme	Satisfaction of staff
Source	PROGRESS, 2010

Indicator No 86	
Definition	Percentage of absence times (sickness, vacation, other) and auxiliary times (meetings, training, etc.) as a share of the total working time
Operationalisation	HRM data; it is indispensable to exactly define the categories of absence times to be included in the numerator, for instance by reflecting upon the degree to which the type of absence time can/should be influenced by staff and management.
Measurement/ Calculation Formula	Numerator: Total number of absence times (by category: sickness, vacation, meetings, trainings, other) per year Denominator: Total working time (based on existing contracts) per year
Use/Purpose	The results of this indicator can provide interesting insight in time use and loss of working time due to various absence and auxiliary times. However, while some categories of absence times may be clearly interpreted as detrimental to the general performance of a care home (e.g. sickness), other absence and auxiliary times might be understood as generating well-being (e.g. if vacation is used on a regular basis) or improved service (e.g. training, coordination meetings). Too extended absence times, on the other hand, might have negative consequences on person-centred care and residents' satisfaction. Management and staff are invited to reflect upon the impact of rising/falling absence times by category and relate data to other indicators such as results from residents' or staff satisfaction surveys.
Perspective	Staff and management
Theme	Sustainability, staff satisfaction, residents' satisfaction
Source	PROGRESS, 2010

Indicator No 87	
Definition	Percentage of staff by age groups (professional groups)
Operationalisation	HRM data; the same data can also be used to identify the percentage of staff by professional groups in order to monitor externally (legal) or internally defined staffing standards.
Measurement/ Calculation Formula	Numerator: Staff per age group (e.g. 16-19, 20-29, 30-40 etc.) Denominator: Total number of staff
Use/Purpose	Though it can be questioned whether this indicator is result-oriented, rather than reflecting the structure of staff, it is important to monitor the average age (also by professional group) in order to avoid staff shortage and to steer a 'generational mix' of staff within the care home. Management and staff are invited to reflect upon the 'ideal' structure of staff and to monitor whether, for instance, it is likely that a high percentage of nursing care staff are reaching pension age during the next 5 years. Corresponding measures might thus be taken to find solutions in a preventive and timely manner.
Perspective	Staff and management
Theme	Sustainability, compliance with legal standards
Source	PROGRESS, 2010

Domain 4: Economic performance

The indicators presented under this domain reflect a broader notion of quality in care services that includes the concept of 'sustainability', which is at the centre of the EU Open Method of Coordination regarding long-term care. A steady continuum in the provision of care services must be guaranteed over time, which means that the management of financial resources must guarantee the viability of the care home over the long-term. Failure to do so would negatively impact on the quality of care by leading to, for instance, increased staff turnover or reducing staff below optimal levels. Ultimately, the closure of a care home and the ensuing need for displacement of the resident would most probably result in an adverse outcome for the residents.

Furthermore, given that available resources are scarce, the provision of care services must be organised in an efficient way to produce the best outcome for residents with the available resources. It is important to stress though, that cost-containment is not the focus or aim of economic performance as measured by the indicators presented here. The aim is rather to achieve a better use of available resources by improving the ratio of outcomes as against means applied and by ensuring the continuity of care over the long term.

Including economic performance within the list of key indicators also addresses the quest for more efficiency and effectiveness in the delivery of social and health services that has been one of the characteristics of the ongoing modernisation process, including the introduction of New Public Management ideas also in the area of long-term care (Huber et al., 2008). In this tradition and by putting an emphasis on performance measurement, the economic performance indicators presented here will allow care homes to work towards comparisons over time and, in a mid-term perspective, between individual organisations or groups of care homes.

Despite the renewed emphasis on efficiency and effectiveness of care services, economic performance indicators were for the most part absent from the various national quality frameworks that formed the basis of the indicators for this project. Most of the indicators presented here were in fact inspired by existing indicators belonging to the E-Qalin quality management system or were created in the framework of the several E-Qalin validation workshops during this project.

Indicator No 88	
Definition	Overall cost per resident for the care home, per year
Operationalisation	This indicator is based on existing financial data in the accounting system (indicate if depreciation of capital is accounted for). The average number of residents is calculated as the monthly average to account for the possible variation in the number of residents throughout the year. Disaggregation of costs (staff costs, costs per living unit etc.) would be of added value. Account for the level of care needs of residents, which should be measured according to the local assessment scale.
Measurement/ Calculation Formula	Numerator: Overall cost of running the care home Denominator: Number of residents (monthly average)
Use/Purpose	Economic evaluation takes into account the costs and benefits of measures or policies, recognising that available resources are limited and thus shedding light on the most cost-effective way to achieve defined aims. This indicator would help to place nursing homes along the production curve, allowing for the analysis of costs and economic sustainability of processes over time and within the care home.
Perspective	Management, policy-makers (purchasers)
Theme	Economic sustainability
Source	E-Qalin, 2009; Sefton, 2000; Drummond et al., 2005

Indicator No 89	
Definition	Staff cost per care days
Operationalisation	Financial data, accounting system. A care day is calculated by the total number of care hours of all residents divided by 24. The indicator could also be combined with the utilisation rate to account for unoccupied places in the care home. Account for the level of care needs of residents, which should be measured according to the local assessment scale.
Measurement/ Calculation Formula	Numerator: Overall staff costs Denominator: Number of care days
Use/Purpose	Economic evaluation takes into account the costs and benefits of measures or policies, recognising that available resources are limited and thus showing the most cost-effective way to achieve certain aims. This key result indicator allows for the quantification of costs with personnel per care day provided. This indicator becomes useful only if applied regularly and when compared with the evolution of care needs of residents. It can also indicate the importance of overhead costs.
Perspective	Management, policy-makers
Theme	Economic sustainability
Source	E-Qalin, 2009; Eisenreich et al., 2004: 59

Indicator No 90	
Definition	Average time for direct care provided per day per resident
Operationalisation	Survey or monitor only direct 'hands-on-care' provided in an individual way over one week. Disaggregation per profession and day/night would be an added value.
Measurement/ Calculation Formula	Numerator: Number of hours of direct care provided by professionals to each resident (by type of profession) Denominator: Number of residents during the week of survey
Use/Purpose	The purpose of this indicator is to assess time spent by personnel in direct contact with residents to provide personal care and assistance. This time may also be put in relation to total working time. Results may be related to residents' satisfaction surveys and steering measures might focus on setting goals for an 'optimal' amount of direct care and respective processes to enable staff to increase the average time for direct care. This implies a reflection on care processes and other processes and tasks to be fulfilled by care staff.
Perspective	Staff and leadership
Theme	Care process
Source	Inspired by MAGS, 2006

Indicator No 91	
Definition	Degree of capacity utilisation
Operationalisation	This indicator is based on the existing data of residents in a given month. It may be supplemented by information about the case-mix of residents. Capacity is defined as the total number of places for which the care home is licensed to operate.
Measurement/ Calculation Formula	Numerator: Number of billable days for residents hosted in the previous month (by individual level of care according to the national/regional definitions) Denominator: Total number of places for which the care home is licensed to operate multiplied by number of days in the respective month
Use/Purpose	This indicator shows the extent of unused capacity, thus signalling underused capacity that could potentially be detrimental for the medium to long-term sustainability of the care home. Unused capacity may flag a potentially bad image of the care home, but it might also be a sign for overcapacities of care home places in the respective region. Aggregated data of care homes could thus become an important tool for policy-makers to manage regional or local care policies. For the individual care home manager it will be important to define realistic and feasible targets and to develop strategies for reducing unused capacity.
Perspective	Management, policy-makers
Theme	Economic sustainability
Source	PROGRESS, 2010

Domain 5: Context

One of the difficulties of comparisons within this sector, not to speak of 'benchmarking', is certainly that the performance of a care home is deeply influenced by the context in which it operates. This includes for example the legal framework, the labour market regulations and economic situation as well as the prevailing cultural values. As care homes exist within a set community from which the resources are drawn, it is important to measure the performance of a care home in relation to the means available in their community, particularly human resources (staff and volunteers) that care homes must attract in order to ensure continuity in their provision of care.

As the key performance indicators were selected on the basis of their capacity to steer change within the care home, there were very few selected indicators for this domain as the legislation frameworks governing the functioning of the care home are set at national level and therefore not subject to change at micro level. Indeed although the care home might find it difficult to find and retain qualified staff, it nevertheless cannot influence the quota of qualified nursing staff which the care home needs to have according to the legislation it is bound to.

Even so, there may be instances where the results of a 'context' key performance indicator can lead to change and improvement of certain processes within the care home. For instance, although staff turnover (due to the nature of the job as a low pay, low status profession) is a systemic challenge across Europe and elsewhere, there may nevertheless be additional reasons for the high turnover which are due to certain specific failings in the care home (for example lack of disciplinary action when staff are faced with abusive behaviour, although again the legal framework may differ from country to country). Steering measures to reduce high turnover might include regular appraisal interviews with all staff members, burnout prevention or exit interviews to better understand the reasons for leaving the care home.

Furthermore, it is an important task of management to contribute to a positive image of the care home and to steer relationships with external partners, suppliers and community networks. For instance, the embedding of a care home in a local community might be shown by the number of volunteers that the care home is able to attract. Steering measures may include activities that are addressing the neighbourhood of the care home including a proactive search for volunteers. Opening the care home to the public, e.g. by renting the assembly hall to local associations or installing a public café with lectures and possibilities to meet with residents and families, might be an additional way to improve acceptance and involvement of the local public.

Indicator No 92	
Definition	Average number of hours provided by volunteers to the care home (per year and per resident)
Operationalisation	A staff member (in many care homes this will be the 'Volunteer Co-ordinator') will be responsible for keeping records and asking volunteers to sign in and sign out at the beginning and the end of their activities. It should be agreed upon, whether to include or exclude hours of volunteer work provided by relatives exclusively to their family member living in the care home. It can also be calculated as a percentage of the number of total working hours of staff (the denominator would then become "Number of working hours provided by staff" – see measurement/calculation formula below).
Measurement/ Calculation Formula	Numerator: Number of hours provided by volunteers Denominator: Number of residents (monthly average)
Use/Purpose	The indicator shows to which degree the care home is able to involve external stakeholders as volunteers to complement professional services. It also indicates to what extent the care home is able to create links to the external community and to provide residents with opportunities to keep social relations with people outside the care home.
Perspective	Leadership
Theme	Development, networking
Source	E-Qalin, 2009

Indicator No 93	
Definition	Average length of employment per staff member in the care home at one point in the year (e.g. 31st December)
Operationalisation	HRM records. Average length of employment refers to the care home only, not to previous employers or previous care homes. All information should be disaggregated by profession. Besides average length of employment, the standard deviation should also be calculated, as it indicates to what extent the length of employment of the staff members tends to be very close to the same value (mean) or more dispersed.
Measurement/ Calculation Formula	Numerator: Sum of the individual lengths of employment (number of months) of each staff member on 31st of December Denominator: Number of staff members on the 31st of December. The measure for the standard deviation is: $\sigma = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(x_i - \mu)^2}$ Where N is the number of employees, xi is the length of employment of employee I, μ is the mean or average length of employment of all employees and ∑ represents the sum.
Use/Purpose	The indicator shows to which degree the care home is able to involve external stakeholders as volunteers to complement professional services. It also indicates to what extent the care home is able to create links to the external community and to provide residents with opportunities to maintain social relations with people outside the care home.
Perspective	Management, staff
Theme	Development, networking
Source	E-Qalin, 2009

Indicator No 94	
Definition	Average length of time (days) needed to fill a staff vacancy with the same level of qualification
Operationalisation	HRM records. Refer to all the vacancies in the past year time span (measure at a fixed point in time).
Measurement/ Calculation Formula	Numerator: Sum of the number of days needed to fill each staff vacancy in the past year Denominator: Number of staff vacancies in the past year
Use/Purpose	This indicator seeks to quantify possible difficulties in recruiting staff, which can ultimately lead to shortages of staff or mismatches in the composition of care staff thus possibly impacting quality.
Perspective	Leadership, policy-makers
Theme	Personnel, human resources management
Source	E-Qalin, 2009

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