

# BMJ Open How are regulatory oversight organisations using long-term care performance indicators: a qualitative descriptive study in 10 high-income countries

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**To cite:** Poldrugovac M, Pot AM, Klazinga N, *et al*. How are regulatory oversight organisations using long-term care performance indicators: a qualitative descriptive study in 10 high-income countries. *BMJ Open* 2023;**13**:e067495. doi:10.1136/bmjopen-2022-067495

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2022-067495>).

Received 17 August 2022  
Accepted 19 January 2023



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## ABSTRACT

**Objectives** Regulatory oversight organisations play an important role in quality stewardship in long-term care (LTC) facilities. Performance indicators are a key tool for any quality-related work. Our aim was to better understand how and what performance indicators are used by regulatory oversight organisations for long-term care facilities oversight and which features are affecting their fitness for use.

**Design** Qualitative descriptive.

**Setting and participants** We explored the use of LTC facility performance indicators by 10 regulatory oversight organisations from England, Ireland, Malta, New Zealand, Norway, Scotland, Singapore, Slovenia, Sweden and the Netherlands. We collected information by means of a questionnaire, 13 follow-up interviews with 20 experts from these organisations and document review.

**Results** Performance indicators are used by participating oversight organisations to choose priority topics for audits, prioritise facilities to be audited and to identify areas within an audited facility, that require more attention. The indicators of most interest to oversight organisations are related to the dimensions of care articulated in the preset requirements on which audits are based. When the purpose of using indicators is to design a risk assessment model, the fitness for use of indicators ultimately depends on their ability to predict non-compliances on subsequent audits. When indicators are used directly by auditors, the ease of access, clear guidance to evaluate the data and the provision of contextual information are used by oversight organisations to increase fitness for use.

**Conclusions** Oversight organisations do not use LTC facility performance indicators to assess quality, but rather to assess the risk of lower quality or of non-compliance with requirements. This risk-related purpose has to be considered when the indicators used in oversight are chosen and when other aspects of fitness for use, such as data analysis and displaying findings, are developed.

## INTRODUCTION

In recent years, the role of regulatory oversight organisations in the development of high-quality long-term care (LTC) services

### STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The inclusion of regulatory oversight organisations from 10 countries meant a wide variety of practices has been explored within the same study.
- ⇒ The in-depth interviews allowed a nuanced understanding of the use of performance indicators within the context of specific organisations and countries.
- ⇒ A limit of the study is the inability to claim a complete overview of existing practices, as it is based on a sample of 10 oversight organisations.

received increased attention.<sup>1–3</sup> Regulatory oversight organisations are part of the system of regulation in health and LTC.<sup>4 5</sup> These organisations are responsible for surveillance of care providers, based on some expected levels of performance<sup>4</sup> and carried out within a formal remit or acknowledged authority.<sup>5 6</sup> Regulatory oversight organisations are often represented by inspectorates. The expected level of performance may be defined in a law, by-law, standard, guideline or other type of document, which may be commonly referred to as requirements.

For current regulatory approaches, performance measurement is considered essential,<sup>7 8</sup> and oversight organisations will therefore seek performance measures, that may be qualitative or quantitative. We use the term performance, to indicate considerations related to quality, but also appropriateness, equity and efficiency, that are not always included in conceptualisations of the term ‘quality’.<sup>9</sup> Quantitative measures of performance, which we refer to as performance indicators,<sup>7 10</sup> are becoming increasingly available in the LTC sector, due to increased attention to performance monitoring and the development of more advanced information

infrastructures.<sup>11</sup> This is particularly true for LTC facilities.<sup>12 13</sup>

Regulatory oversight organisations, in light of the complex relationship with care providers, defy a simple categorisation of uses of performance indicators. In healthcare, these uses are traditionally grouped as either formative, that is, providing support to quality improvement, or summative ones, that is, ensuring acceptable levels of performance of service providers.<sup>7 14</sup> The role of oversight organisations is to both support quality improvement as well as ensure acceptable levels of performance. In order to do that, different regulatory models may be employed. Gilad<sup>15</sup> described three types of regulatory institutional models: prescriptive, outcome oriented and process oriented. In prescriptive approaches, compliance with requirements is determined by oversight organisations based on adherence to prescribed actions.<sup>15</sup> In outcome-oriented approaches, the determination is based on the results achieved by overseen organisations, while in process-oriented approaches system design and systemic learning in overseen organisations are at the centre. These approaches are not mutually exclusive and in fact all of them may be used by an oversight organisation. Furthermore, oversight organisations often use risk-based approaches, whereby oversight activities are (partly) guided by the risk assessment of service providers. The risk assessment aims to predict the likelihood of non-compliance with requirements, based on available data<sup>1 16</sup> and hence of low-quality or adverse outcomes. The types of regulatory institutional models used and the adoption of risk-based approaches influences the type of performance indicators oversight organisations will seek.

Not all performance indicators are well-suited to the needs for intelligence of each stakeholder, such as oversight organisations.<sup>17 18</sup> The role of stakeholders will have implications for the purposes for which performance indicators are employed. How performance indicators are used is therefore specific to each stakeholder. It is possible to understand these dynamics within oversight organisations by considering the performance indicators that they actually use.

The suitability of performance indicators in relation to specific needs has been defined by Barbazza *et al*<sup>18</sup> as fitness for use of performance indicators. When assessing fitness for use of performance indicators methodological, contextual and managerial aspects need to be considered.<sup>18</sup> Methodological considerations are particularly relevant for developers of indicators. Oversight organisations often use existing indicators. In these cases, contextual aspects and managerial aspects are at the forefront when considering the fitness for use of performance indicators. The contextual aspects to be considered are the supporting information infrastructure (eg, is the needed data of quality?), governance (eg, what kind of legislation supports performance monitoring?), workforce capacity (eg, is there expertise to interpret the data?) and culture (eg, does the organisational culture support continuous learning?). The managerial aspects include selecting

indicators, accessing data, applying methods of analysis, displaying findings and reaching decision-makers.<sup>18</sup> Several fitness for use considerations are a consequence of how performance indicators are used and hence are common to all indicators serving a common purpose.

The aim of this study is to better understand the use of performance indicators by regulatory oversight organisations responsible for institutional oversight of LTC facilities. More specifically, we set out to answer the following questions:

- ▶ How are performance indicators used by regulatory oversight organisations in the context of LTC facility oversight?
- ▶ What performance indicators do regulatory oversight organisations use as part of their oversight activities of LTC facilities?
- ▶ Considering the purposes of use of performance indicators, how fit for use are they?

## METHODS

To answer the research questions, we used a qualitative descriptive study approach. The study was reported in-line with Consolidated criteria for Reporting Qualitative research<sup>19</sup> (online supplemental file 1).

### Selection of regulatory oversight organisations

A convenience sampling approach was used. Regulatory oversight organisations were invited to participate through two international partnerships of oversight organisations that supported the project: the European Partnership for Supervisory Organisations in Health Services and Social Care (EPSO) and the Supervision and regulation Innovation Network for Care (SINC). These partnerships are based on voluntary participation of oversight organisations and not on formal country representation. The involvement of oversight organisations in these partnerships varies, depending on interest and opportunities. There are 11 organisations from as many European countries or regions who are members of SINC. Participation to EPSO is more varied, as some organisations are more regular participants than others and some participants are not official representatives of their organisations. Both partnerships aim at exchanging experiences, best practices and provide mutual support in developing and improving regulatory oversight. In order to do this, they organise regular meetings of their members and other invited guests, both online and in person. The study was presented at a regular meeting of each of the partnership. All of the participating organisations were invited to participate, contact details of the researchers were provided. Furthermore, 16 organisations were invited directly by email based on immediate reactions during the presentation, on discussions with the partnerships leadership about the heterogeneity of supervisory practices in various organisations and also considering broad geographic distribution of the supervisory organisation. Overall, 16 organisations were invited directly by email to participate in the study, 9 agreed to participate. In June 2021, data saturation was discussed with the authors,

leading to a further invitation of 2 new organisations and a new contact of an already contacted organisation, thus bringing the total of contacted organisations to 18. One additional organisation agreed to participate. Among the eight non-participating organisations in total, in one case, the invited person reported resource constraints of the oversight organisation as the reason for not participating in the study. In the other seven cases, initially contacted persons or those referred by them did not respond to our invitation.

The invitations sent by email included a background of the study, stating its purpose and the data collection strategy, and a questionnaire. The invitation also clarified that we were seeking information on each oversight organisation from staff members or managers, who are involved in the oversight of LTC facilities. The questionnaire also asked to indicate one or more persons to be contacted for a follow-up interview. At least one interview took place with each participating organisation, after receiving the completed questionnaire.

The data collection period went from March 2021 to July 2021.

### Questionnaire

The questionnaire was constructed to provide key information and references to documents that are important to understand the relation between oversight organisations and quality improvement (online supplemental file 2).

The questionnaire was based on a review of the literature on regulation and quality improvement.<sup>1 2 4 5 20–22</sup> The questionnaire reported the definition of LTC facility used by the Organization for Economic Cooperation and Development.<sup>23</sup> However, in recognition of the fact that LTC facilities definitions and services provided vary considerably between countries and regions, whenever doubt was expressed by participants, we asked them to apply the definition to the extent possible in their context. The questionnaire asked for details about the scope and mandate of the oversight organisation, about requirements used by oversight organisations, internal processes (such as how decisions to audit a facility are taken), about the use of a selected set of commonly used performance indicators and about the sources of information available to oversight organisations.

Face validity of the questionnaire was established through consultations among the authors and with a person with extensive professional experience in auditing LTC facilities, who did not participate in the design of the questionnaire. The questionnaire and responses were in English. Reference to documents in languages other than English was explicitly stated as welcome. Google Translate was used to translate documents and web pages provided in languages other than English (Dutch, Norwegian and Swedish).

### Follow-up interviews

All the interviews were conducted by the first author (MP), who is a male researcher in health performance

intelligence with training in qualitative research methods and experience in conducting interviews. The interviewer introduced himself at the beginning of each interview, including his position as a PhD candidate in the area of performance intelligence. The interviews were based on an interview guide developed with the coauthors (online supplemental file 3). The aims of the interviews were to better understand the responses to the questionnaire and the fitness for use of performance indicators.

Up to three participants from each oversight organisation participated in the interview. The interviews lasted 1 hour on average and were almost all conducted in English via video-conferencing and recorded. The interviews were transcribed verbatim (N=12). One interview was conducted in Slovenian over the phone and was not recorded. Interview notes in English were used to further analyse in this case. All but one of the study participants were not known to the interviewer prior to the study commencement. The person is also a study coauthor, who did not participate in the interview analysis. In some cases, participants were asked by email for additional material, as agreed in the course of the interview. In the course of the analysis of the interviews and retrieved documents, we did not find major information gaps, that would require repeat interviews.

### Additional sources of information

The documents referred to in the questionnaire and during interviews were retrieved. Additional documents were reviewed in preparation for each interview. These documents mostly comprised publicly accessible information on oversight organisations' websites, regulations and oversight-related guidance documents.

Preliminary findings were presented and discussed on three separate occasions with participants to meetings organised by the partnerships of oversight organisations EPSO (in May and December 2021) and SINC (in November 2021), who had the opportunity to provide feedback on the presented findings meeting attendees included participants to the study, as well as persons and organisations that did not participate in the study.

### Data analysis

Several data analysis approaches were used to answer the research questions. A visual mapping strategy was employed to understand how indicators are used.<sup>24</sup> This approach involved analysing the transcripts of the oversight arrangements in each country, for which a participating organisation is responsible. Each participating oversight organisation employs a different set of procedures through which the oversight is operationalised. These procedures were articulated in organisation-specific flowcharts, where the key steps that constitute the procedure were identified. These flowcharts were then compared with find similarities and differences. Based on the findings, we created a general flowchart presenting all the reported oversight arrangements, to the extent that they relate to the use of performance indicators.

To understand which performance indicators are used by oversight organisations, we reviewed the documents retrieved and the interview segments related to the description of performance indicators used. The latter were identified through thematic analysis. We identified the most frequently reported dimensions of performance considered by oversight organisations and retrieved concrete examples of indicators used.

A thematic analysis of the interviews was used to identify the purposes and fitness for use of performance indicators. The approach was based on low-inference description.<sup>25 26</sup> The thematic analysis involved an initial deductive set of 10 codes, derived from questionnaire sections and interview questions. Codes were added to these with an inductive approach. Through several iterations of the interview reviews, codes were modified. One person coded the interviews (MP). After initial coding of two interviews, both the codes and the interview coding were reviewed by another author (DK). Similar codes were merged into themes. The list of themes with examples is provided in online supplemental file 4. The themes were then related to each of the aspects of fitness of use, as identified by Barbazza *et al.*<sup>18</sup> To do that, each theme was considered for relevance to each aspect of fitness for use. All the segments assigned to a theme were then reviewed in relation to each relevant aspect of fitness for use.

The qualitative analysis was performed using the software QDA miner lite V.2.0.8. The flowcharts were created using Microsoft PowerPoint.

### Patient and public involvement

Patients were not involved in the study. LTC service providers were identified as a key stakeholder on the issue of performance indicators' use by regulatory oversight organisations. For this reason, an interview was conducted with senior management of such a provider in the Netherlands. It was focused on the availability and use of performance indicators to the service provider and on the relationship between the provider and the relevant regulatory oversight organisation. The interview was conducted during the process of developing the questionnaire and the interview guide for participants and informed their content. Two networks of oversight organisations supported the project and provided several opportunities to discuss and in the future disseminate the findings.

### Results

Oversight organisations from ten high-income countries participated in the study, providing both responses to the questionnaire and participating in a follow-up interview (table 1). All organisations have a national mandate. Twenty persons were interviewed in 13 separate interviews. Among the 20 participants, most of them were managers of auditors, auditors or both (14 persons). Four participants had advisory roles supporting the oversight organisations and two were intelligence officers.

**Table 1** Overview of participating organisations, respective countries and interviews performed

| Participating organisation               | Country         | Persons interviewed, n | Interviews, n |
|------------------------------------------|-----------------|------------------------|---------------|
| Health and Youth Inspectorate            | The Netherlands | 3                      | 2             |
| Care Quality Commission                  | England         | 2                      | 1             |
| Labour inspectorate, Social inspection   | Slovenia        | 1                      | 1             |
| Health and Social Care Inspectorate      | Sweden          | 3                      | 1             |
| Care Inspectorate                        | Scotland        | 2                      | 2             |
| Ministry of Health                       | New Zealand     | 3                      | 1             |
| Social Care Standards Authority          | Malta           | 2                      | 1             |
| Norwegian Board of Health Supervision    | Norway          | 2                      | 2             |
| Ministry of Health                       | Singapore       | 1                      | 1             |
| Health Information and Quality Authority | Ireland         | 1                      | 1             |

### How indicators are used

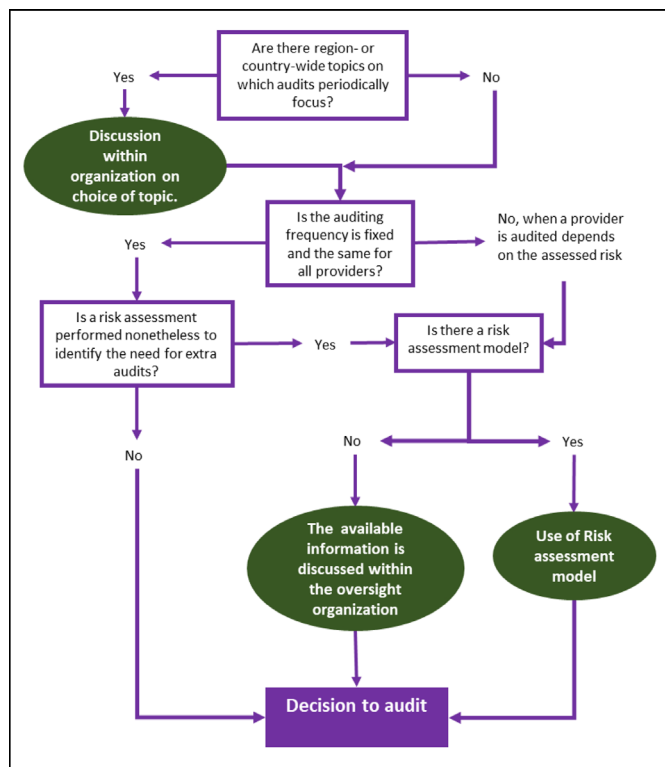
All participating organisations oversee individual LTC facilities, through inspections, or audits. We will use the term audit to refer to all of these, as the more general term.

While all participating organisations do audits, they differ on how the decision to audit a specific LTC facility is taken (figure 1) and on how the audit is carried out (figure 2). As a consequence, performance indicators have different roles.

The analysis of the oversight procedures employed by participating oversight organisations lead to the identification of five activities within these procedures, where performance indicators may play a role. Three of these activities are part of the procedures leading to a decision to audit an LTC facility (figure 1), while two activities are part of the audit process (figure 2).

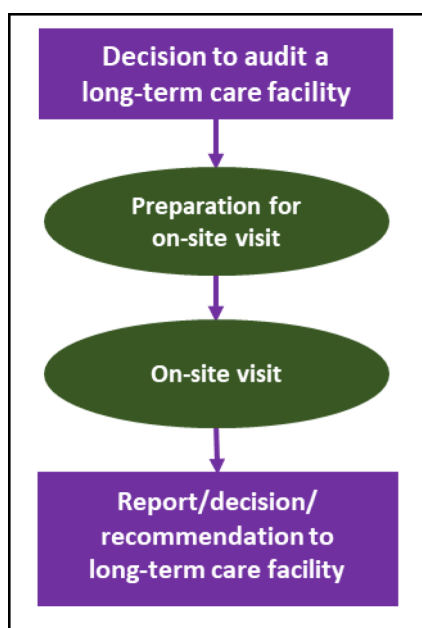
The three activities in figure 1 are not part of the oversight procedures in all participating organisation. Whether any of these three activities are included in the oversight procedures of an oversight organisation depends on the responses to the leading questions presented in the flowchart (figure 1). Furthermore, the employment of any of the three activities does not imply that performance indicators inform the activity in a specific organisation. The first of these activities is the discussion on country-wide or region-wide topics on which audits will focus, for example, oral hygiene or medication reconciliation. Such a discussion may be aided by consideration of the performance indicators regularly collected by the oversight organisation.

The second activity where indicators may be used is related to the use of risk assessment models. These are employed by some organisations to prioritise LTC facilities where audits are planned or to set time intervals between audits. The information received is assessed in one of two possible ways. The first approach is particularly



**Figure 1** Flowchart of the potential pathways leading to a decision to audit a long-term care facility. The activities that may involve the use of performance indicators are marked by oval boxes. The leading questions are marked by rectangular frames.

applicable to numeric variables, such as performance indicators. In these cases, the level of risk that a specific value of an indicator represents is derived from basic statistical



**Figure 2** Flowchart of the potential key steps in an audit process. The activities which may involve the use of performance indicators are marked by oval boxes.

calculations. For example, values in the top or bottom 10% may be considered high risk values. The second approach involves a review of the piece of information by an auditor. A typical example is the report of a serious incident by the provider. Such a report is often processed by auditors and risk assessed based on the information that the auditors gathered.

The third activity where performance indicators may be used involves risk assessment that is not mediated by a risk model. In these cases, often there is no formal risk value given to each institution, but rather a decision on which LTC facility to audit or when is based on discussions among auditors. These discussions may be informed by performance indicators.

Oversight organisations may also decide to audit an LTC facility based on a specific complaint or serious incident. In these cases, performance indicators tend to not contribute to the decision and hence this pathway is not presented in [figure 1](#).

Once a decision to audit an LTC facility is taken, performance indicators can be used within two activities during the audit process ([figure 2](#)). The first activity is the preparation for an on-site audit, the second activity is the on-site audit itself. In all of the participating oversight organisations, there is a preparation for an on-site audit and the on-site audit itself. However, there is a lot of variability among organisations in how these activities are carried out. The availability of performance indicator information during the preparation of the audit may influence the focus of the on-site audit. When the performance indicators are obtained on-site, the findings will more likely lead to minor adjustments to the existing audit plan.

The level of standardisation of the audit process varies among oversight organisations. In some cases, there are very specific guidance documents. The guidance documents available to the authors do not explicitly require to collect information on performance indicators, although such information may be cited as evidence in audit reports. In cases where there is no standard document guiding the audit process or the guidance document is not very specific, the practice of using performance indicators varies considerably depending on the auditor and the available information about the LTC facility. The review of performance indicators is sometimes implied by the requirements overseen by the auditor. For example, a requirement to minimise the use of restraints will likely lead the auditor to look or ask for indicators on the use of restraints.

### Which indicators are used

The practices regarding collection and publication of performance indicators in LTC vary considerably in the various countries considered. Our focus was not on indicators that are available in a particular country or to a particular organisation, but rather what and how indicators are actually used by oversight organisations in their processes. It is impossible to draw a definitive list

of indicators used by oversight organisations for several reasons. Performance indicators are partly used at the discretion of individual auditors. For example, an auditor may ask to see reports on a specific performance indicator because of a finding in the course of the audit. Such an indicator may not be always available, if there is no obligation to monitor it. Furthermore, the decision to use this indicator in the course of the audit may not be taken in a different situation, even by the same auditor.

Furthermore, their use sometimes depends on the current priority topic identified by the oversight organisation at the country level, regionally or locally. Additionally, performance indicators are sometimes used in risk models, that are not made public by oversight organisations.

Through the interviews and documents' review, we sought those documents that most closely reflect how oversight organisations approach the assessment of LTC facilities. An overview of the identified frameworks and their respective documents is provided in online supplemental file 5. The elements of the framework have different names (eg, pillars, domains or key questions), but all tend to indicate one or more dimensions of performance that oversight activities focus on, such as residents' rights, person centredness, safety, care planning, service provision and staffing. The frameworks do not make explicit reference to performance indicators. In the cases where participants reported using performance indicators, they either referenced separate oversight organisation documents or performance indicators' sets collected and provided by other organisations. An example of the former is represented by notifications requirements set by Care Inspectorate Scotland,<sup>27</sup> which set requirements for recordkeeping on the basis of which indicators are calculated. An example of the latter are the publicly available indicators of the Directorate for Health in Norway,<sup>28</sup> which are available to be reviewed by auditors when needed.

It should also be noted that oversight organisations usually collect data on serious adverse events and complaints. Adverse events and complaints are often analysed or investigated on a per-case basis, sometimes leading to focused audits. So adverse events and complaints are usually not featured as indicators, but their role in steering the activities of oversight organisations has been mentioned often by participants.

### Indicators' purpose and fitness for use

The purpose of use of LTC facilities' performance indicators by oversight organisations is to assess the risk of care not being in line with established requirements or in any case of relatively lower quality when compared with peer groups. However, performance indicators are not used as the ultimate measure of performance:

...you check maybe all the other statistics that you can find. So, you can have a better... you don't inspect on base of this, but you get better, you're better

informed. So, if you meet the leadership of that [LTC facility], then you know, you can... Because it's not so easy to come and make a judgement. You need to let you see the whole picture and maybe have a dialogue with them. (Participant P46)

Ultimately, performance is assessed by auditors and is based in adherence to existing requirements.

### Governance aspects of fitness for use

The fitness for use of performance indicators is influenced by the governance structures of the LTC systems in each country. In particular, mandates of oversight organisations with respect to LTC did not explicitly include quality improvement in 2 out of the 10 oversight organisations considered. Nonetheless, some approaches are similar in organisations with and without a mandate for quality improvement.

we also ask for your incident reports so we can see whether... how was your fall rates like, what your... all the other indicators. Basically, it's not to see or not to judge how high the occurrences of incidences, but more to see that when there's an incident there is some follow up checks and processes and implementation to fill in the gaps that are in place. (Participant P14)

This quotation refers to an oversight organisations without an explicit quality mandate. Auditors nonetheless look at performance indicators during an audit on a per-case basis to assess whether the LTC facility acted on those indicators appropriately.

### Information infrastructure aspects of fitness for use

Strengthening information technology (IT) support for the work of oversight organisations has been mentioned often by participants. In particular in three organisations, the efforts are concentrated on improving IT support internally, that is, making better use of data that is already available to oversight organisations. Only in one oversight organisation, the goal of IT development is to be able to collect all LTC data that is now available to other institutions, which gives the oversight organisation a leading role in improving data interoperability.

### Workforce capacity aspects of fitness for use

Contextual considerations also include workforce capacity. Some participants indicated that the competences of auditors to make the best use of performance data vary considerably.

...I think the more data literate of our inspectors have found that very valuable. And I think some inspectors are still struggling a little bit with this reliance on data. (Participant P82)

### Cultural aspects of fitness for use

Participating oversight organisations tend to support a collaborative approach with LTC facilities, that is founded

on dialogue, as opposed to what is sometimes described as ‘check the box’ approach.

In some cases, the reliance on dialogue and supporting LTC facilities lead to the conclusion that there is no need for an agreed set of indicators:

But from a regulation point of view, at the end of the day, we don't mind what they use as long as it's effective and that the staff can use it and that it's relevant to the residents. So that's, you know, we would come in if... if it's not being effective. (Participant P63)

#### Indicator selection considerations of fitness for use

Performance indicators selection is guided by identified information needs of oversight organisations:

So we include pressure sores because we thought it was an important indicator, especially in older person services, that that wasn't included [before] (Participant P63)

Sometimes, a more systematic approach is used exploring information needs, where working groups within the organisation are established to discuss such issues.

One oversight organisation reported that their indicators on safety are based on research performed by a university on harm experienced by older persons.

Publicly reported performance indicators are often chosen, making sure that the indicators do not convey a message of weak performance of a provider, if this is not the case when the circumstances are carefully scrutinised. The purpose of performance indicator use in oversight organisations is different.

So, we need information where we don't miss any risks and we need a lot of false positives. We don't... We need information that doesn't miss the positives. (Participant P31)

Publicly reported indicators do not necessarily fit well with the uses made by oversight organisations.

#### Methods of analysis considerations of fitness for use

In the cases where indicators are collected and summarised by oversight organisations, for example, in a risk model, they also face the question of how to summarise and in some cases analyse the collected data. The approaches reported by participants include: benchmarking against peer groups of LTC facilities, the use of 10% and 90% quantiles to identify outliers and statistical process control, a set of tools pioneered by Walter A. Shewhart in 1920s. Generally, oversight organisations do not set threshold values for indicators. However, there might be threshold values determined by other organisations (eg, staffing norms set in by-laws, or values identified by professional organisations as indicative of good clinical care) that are used as reference by oversight organisations.

Consistently, participants warned about the importance of context, when assessing performance indicators.

But I also am very interested in what organisations write with [the indicator value], so the qualitative parts of the indicators, because that sometimes that tells you more about what's going on than just the figure itself. (Participant P85)

#### Access and display of findings considerations of fitness for use

When performance indicators are used for risk assessment through an internal dashboard, managed by the oversight organisation, the indicators' risk scores tend to be presented in a colour coded indication of risk:

So, it's based on the five by five of probability and likelihood. And then we go range it from... most, most people internally don't go by the numbers, they go by if it's green, yellow, orange or red. So, they go by the colouration. (Participant P63)

Sometimes the display of findings follows a two-step process. The first step consists in providing a single (composite) risk score for each LTC facility or a ranking of LTC facilities based on risk. Once the LTC facilities of interest are identified, in-depth information on each LTC facility can be searched, typically with interactive dashboards where individual indicators are displayed separately.

## DISCUSSION

With this study, we improved our understanding of the use of performance indicators by regulatory oversight organisations responsible for institutional oversight of LTC facilities. Performance indicators are used by oversight organisations to choose priority topics to focus on and to choose LTC facilities to audit. Performance indicators are also used in the audit process, prior and during an on-site inspection. In all cases, the role of indicators is in identifying risks that need further consideration. Taking into account, the assessment frameworks used by participating oversight organisations, they are mostly interested in performance indicators related to person centredness, safety, clinical care, workforce and leadership aspects. The fitness for use of performance indicators will depend on contextual factors such as alignment with the mandate of the oversight organisations, data expertise of auditors and prevailing regulatory approach<sup>15</sup> used by the organisation. Additionally, the fitness for use of performance indicators will also depend on identification of the information needs of oversight organisations and on internal communication about the risk represented by the observed indicator values, including the importance of contextual information.

A major strength of the study is the combination of international breadth and in-depth interviews, which allowed a good understanding of a wide variety of practices within the same study. This is important especially with regard to the great variety of regulatory approaches

in different countries in the field of LTC.<sup>15</sup> However, a clear limit of the study is the inability to claim a complete overview of existing practices, as it is based on a sample of 10 oversight organisations. Furthermore, the EPSO and SINC partnerships through which we engaged oversight organisations, use English as working language for all communication. This fact may further limit the participation of organisations where English represents a language barrier. To mitigate these limitations, we tried to capture diversity of practices by including organisations from diverse geographical areas that other authors described as using different regulatory approaches to quality of care.<sup>29</sup>

Our analysis did not reveal any instance, where performance indicators are used as the determining factor of the quality of services provided. They may, however, steer the audit processes. This suggests that within oversight organisations they are an indicator of risk of low quality of care as opposed to being an indicator of quality of care itself. This is in contrast to the way performance indicators are used in other contexts. For example, international comparisons of performance indicators are based on the idea that such indicators measure aspects of care quality.<sup>30 31</sup> Also, the theoretical underpinning of publishing performance indicators to give users a choice rests on a similar idea, that is, that indicators reflect the quality of care users are likely to receive.<sup>32</sup>

For oversight organisations in this study, the current ultimate reference is compliance with the established requirements, which thus becomes the implicit definition of quality of care.

It is important not to confuse compliance with requirements with what we called a ‘check the box’ approach, described by Gilad<sup>15</sup> as prescriptive regulation. Ensuring compliance with requirements may also involve outcome and process oriented approaches. For example, the requirements in both Sweden and Norway state that LTC facilities must have a quality management system in place.<sup>33 34</sup> Such requirements encourage a process oriented approach.

If performance indicators are integrated into a risk assessment model, extensive research and development efforts are required.<sup>35 36</sup> A different set of considerations emerges when performance indicators are used in the audit process. In this case, auditors need to be able to recognise the value of performance indicators in pointing to risks, but should not feel restrained in their capacity to assess an LTC facility by what the indicators are suggesting. To address this challenge, participating oversight organisations reported using several approaches:

- ▶ Developing IT support within the oversight organisation, to improve the ease of access of already collected data.
- ▶ Providing benchmarks and identifying outliers to support auditors in better understanding the data.
- ▶ Introducing dashboards that allow intuitive visualisations of the data considered relevant.
- ▶ Allowing LTC facilities to provide contextual information to performance data.

- ▶ Taking advantage of auditors’ knowledge and experience to assign a risk score to the reported indicator values.

Other regulatory oversight organisations that have identified similar challenges in improving the use of performance indicators may find the approaches indicated helpful.

The use of performance indicators for regulation may change due to the great emphasis on person centredness as a quality requirement for LTC provision.<sup>37</sup> LTC residents differ in their needs and preferences, which will also change over time. In this view, the ultimate measure of high-quality care is not given by performance indicators or requirements, but rather by the experience of persons using LTC. This is surrounded by complexity and uncertainty and may therefore require a more flexible, reflexive form of regulation than the traditional command and control approach.<sup>38</sup> The information that will be obtained with such a new regulatory approach may influence the use of regularly monitored quantitative indicators for oversight.

## CONCLUSIONS

Performance indicators are used by regulatory oversight organisations for different purposes. One reason is to assess the likelihood that the care provided by LTC facilities is of lower quality or not in line with requirements. Such assessments are made to choose priority themes as well as to prioritise LTC facilities for oversight. Furthermore, performance indicators are used in the course of a facility audit to identify areas that require more attention. Auditors tend to have considerable discretion in deciding what performance indicators to review and in which way. They are most interested in those related to the dimensions of care that requirements point to, such as person centredness and safety.

The fitness of use of performance indicators is dependent on the purpose for which they are used. For example, when the purpose is to load a risk assessment model, they are particularly fit for use when they are good at predicting non-compliance with requirements on audit. When the purpose of indicator use is to alert auditors to specific areas that requires more attention during an audit, the fitness for use of the indicators will also depend on how accessible and easy to evaluate the indicators are. The further development and use of performance indicators of LTC facilities by regulatory oversight organisations should address not only the technical and statistical measurement characteristics but also the fitness for purpose and use given the mandate, vision (formative/summative), functions and assessment processes of regulatory organisations.

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**Acknowledgements** The authors would like to acknowledge the participants from regulatory oversight organisations who provided indispensable information for this study through interviews and in writing. The authors would like to thank Jooske Vos of EPSO for her contribution to the conceptualisation of the study and her support in involving oversight organisations. The authors would also like to thank the leadership of SINC for the support in involving members of their network.

**Contributors** MP, AMP, NK and DK participated to the conception and design, acquisition of data, analysis and interpretation of data. MP prepared the initial manuscript draft that was critically and substantially revised by AMP, NK and DK. MP, AMP, NK and DK provided approval of the version to be published and agree to be accountable for all aspects of the work. MP is responsible for the overall content and acts as guarantor.

**Funding** This work was supported by the European Union's Horizon 2020 research and innovation programme within the Marie Skłodowska-Curie Innovative Training Network (HealthPros—Healthcare Performance Intelligence Professionals) under grant agreement number 765141.

**Competing interests** MP work is funded by a Marie Skłodowska-Curie Innovative Training Network grant from the European Union. DK and NK contributed to the application for that grant. The European Union was not involved in any part of the study, including its conception, design, data collection, analysis or interpretation.

**Patient and public involvement** Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

**Patient consent for publication** Not applicable.

**Ethics approval** This study involves human participants. The study adheres to the requirements of the Medical Research Involving Humans Act (*Wet medisch-wetenschappelijk onderzoek met mensen*), and the Research Code of the Amsterdam University Medical Centra based on which exemption applies as the study did not involve personal data collection, nor subjected persons to interventions, nor did it impose a specific behaviour on participants. The authors considered voluntary informed consent adequate. Participants gave informed consent to participate in the study before taking part.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** All data relevant to the study are included in the article or uploaded as online supplemental information. All relevant data are within the manuscript and its Supporting Information files. The results are supported by in-text quotations and documents reported in the references and the online supplemental information files.

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