Health and long-term care system introduction and reform – concepts and operationalisations for global and historical comparative research
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HEALTH AND LONG-TERM CARE SYSTEM INTRODUCTION AND REFORM — CONCEPTS AND OPERATIONALISATIONS FOR GLOBAL AND HISTORICAL COMPARATIVE RESEARCH

Gabriela de Carvalho and Johanna Fischer

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1. INTRODUCTION

The provision of care for people with acute or long-term impairments is a fundamental aspect of life in societies worldwide. Like the dealing with other social risks and needs, the organisation of healthcare (HC) and long-term care (LTC) varies across space and time. By analysing this geographical and temporal variation, we can learn, for instance, about common solutions and issues, converging or diverging developments and its drivers, regional

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patterns, and common international influences. We can gain these insights, in particular, by comparing approaches to HC and LTC as they exist and have existed in the past. Comparison is a helpful tool as it enables the researcher to both make statements about empirical regularities and/or interpret and understand cases relative to other instances of the phenomenon (Ragin 1987; Della Porta 2010). Our research interest lies in comparing HC and LTC arrangements worldwide, with a special focus on HC and LTC systems under public responsibility, that is, with some degree of state involvement.

A well-conducted comparison requires, however, as a prerequisite that one defines and operationalises the object(s) of study carefully. This endeavour becomes even more relevant if the population of cases under study comprises tremendous regional and temporal variation. Otherwise, diverse local understandings and terminologies of the phenomena might obfuscate comparative research. Therefore, this paper sets out to discuss and outline definitions and operationalisations for key concepts when studying (public) welfare systems and social policies with regard to HC and LTC. In part two, we start by discussing the definition of healthcare and long-term care itself and introduce the key concept of a HC/LTC system. We then proceed in section three to define and operationalise system introduction, that is, when did a HC/LTC system under public responsibility begin, as well as major HC/LTC reforms, that is subsequent paradigmatic changes. For both concepts, we present concrete criteria on how to ‘measure’ the occurrence of system introduction and reform and provide the examples of the HC systems of Brazil and Uruguay to illustrate our procedure. Both part two and three contain ‘definition boxes’ on all relevant concepts discussed in the paper. In the concluding section, we briefly touch upon the use of our conceptualisation and operationalisation for data collection and analysis.

2. Key Concepts

In this section, we discuss our key research objects: HC, LTC and HC/LTC system. In doing so, we engage with extant literature and outline and explain our definitions.

2.1. Healthcare

In contrast to other types of care (see, for example, the discussion on the definition of LTC below), there seems to be a general agreement in extant scholarship on how to conceptually HC. As HC is one of the foundational pillars of the welfare state and has been extensively studied over the last century, it is often not required, or even expected, of researchers to engage in the discussion of this well-settled definition. Generally, HC is understood as the activities for the treatment and prevention of the ill performed by trained professionals, with the most commonly referred to conceptualisations set by international organisations, such as those provided by the World Health Organisation (WHO) and the Organisation for Economic Co-operation and Development (OECD). Although this section focuses on institutional definitions of HC, Table 1 provides a list with further concepts.

The OECD defines HC as the sum of the tasks “performed either by institutions or individuals pursuing, through the application of medical, paramedical and nursing knowledge

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2 This paper adopts the theoretical framework of the Collaborative Research Centre 1342 ‘Global Dynamics of Social Policy’ and the project A04 ‘Global Developments in Healthcare Systems and Long-term Care as a New Social Risk’, see https://www.socialpolicydynamics.de/research-programme/en/
and technology, the goals of: promoting health and preventing diseases; curing illness and reducing premature mortality; caring for persons affected by chronic illness who require nursing care; caring for persons with health-related impairment, disability, and handicaps who require nursing care; assisting patients to die with dignity; providing and administering public health; providing and administering health programmes, health insurance and other funding arrangements” (2000, 42). In a similar, but more condensed vein, the WHO (2004) understands HC as the services provided to persons or communities by health service providers aiming at promoting, maintaining, monitoring or restoring health.

**Table 1. Selected healthcare definitions**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare differs from other commodities because it is typically provided in a series of separate but related delivery sessions. While there are instances when healthcare is provided as a single standalone service, similar to haircuts or real estate appraisals, this is not usual. Moreover, healthcare services include a variety of elements, such as telephone consultations, physician office visits, prescriptions, laboratory tests, radiologic procedures, surgical procedures, and hospital stays. This means that multiple services, over a period of time, are directed to achievement of the optimum care for a particular medical problem. All of these services, therefore, must be included to produce a comprehensive economic analysis of healthcare delivery.</td>
<td>Hornbrook et al. 1985</td>
</tr>
<tr>
<td>Healthcare is the sum of the tasks performed either by institutions or individuals pursuing, through the application of medical, paramedical and nursing knowledge and technology, the goals of: promoting health and preventing diseases; curing illness and reducing premature mortality; caring for persons affected by chronic illness who require nursing care; caring for persons with health-related impairment, disability, and handicaps who require nursing care; assisting patients to die with dignity; providing and administering public health; providing and administering health programmes, health insurance and other funding arrangements</td>
<td>OECD 2000</td>
</tr>
<tr>
<td>Healthcare are the services provided to persons or communities by health service providers aiming at promoting, maintaining, monitoring or restoring health.</td>
<td>WHO 2004</td>
</tr>
<tr>
<td>Healthcare are all the activities with the primary purpose of improving, maintaining and preventing the deterioration of the health status of individuals and mitigating the consequences of ill-health through qualified health knowledge</td>
<td>SHA 2011</td>
</tr>
<tr>
<td>Healthcare is charged to do more with less and improve patient satisfaction at the same time in order to balance the bottom line</td>
<td>Rinehart 2013</td>
</tr>
</tbody>
</table>

Source: Own presentation.

The most commonly used definition of HC, which often guides policy recommendations and data collection, seems to be the one provided in the last edition of System of Health Accounts (SHA) (2011), by the WHO, Eurostat and the OECD. These three institutions characterize HC as the activities with the primary purpose of improving, maintaining and preventing the deterioration of the health status of individuals and mitigating the consequences of ill-health through qualified health knowledge. The emphasis placed by the SHA definition on persons’ health status is in accordance with our research interest as we focus on programmes that expressly aims at improving and maintaining health rather than health as a secondary aim, such as sanitation and city planning. We, thus, conceptualise HC according to the SHA definition.

**Healthcare comprises all the activities with the primary purpose of improving, maintaining and preventing the deterioration of the health status of individuals and mitigating the consequences of ill-health through qualified health knowledge.**
2.2. Long-term care

In general, LTC describes various kinds of assistance provided over an extended period to support care-dependent persons. Existing definitions of LTC vary in scope and emphasis, not only in scholarship but also in legal definitions employed in different countries (Boll and Ferring 2018; Fischer and Rothgang 2020). Furthermore, there are several terminologies – beyond LTC – that are used to denote the phenomenon, like elder(ly) care (see also Weicht 2015, 142) or social care (Wittenberg 2016, 10). The diverse terms and understandings in the field make international comparisons challenging (cf. Österle and Rothgang 2010). Therefore, it is especially important – more so than in researching HC – to clearly conceptualise the meaning of LTC before engaging in comparative analysis.

The notion of care dependency – a complex phenomenon in and of itself – is key when defining LTC. Care dependency is linked to functional limitations which often occur as a consequence of diseases or accidents; however, the concept reaches beyond this description (Boll and Ferring 2018; Gilberg 2000; see also the International Classification of Functioning, Disability and Health (ICF), WHO 2001, 18–20). Accordingly, care dependency exists if physical and/or mental impairments that hinder autonomous living “cannot be compensated by environmental arrangements or by individual coping resources” (Boll and Ferring 2018, 168). To determine or ‘measure’ which activities have to be impaired in order to recognize care dependency, there are various approaches and instruments. Two approaches that are widely known and spread are the Activities of Daily Living (ADLs) and the Instrumental Activities of Daily Living (IADLs), which were developed in the 1960s (Kovar and Lawton 1994; Colombo et al. 2011). While ADLs include basic activities of self-sufficiency like eating, body hygiene, and dressing, IADLs focus more broadly on independent living, including activities like transportation, housework, or managing finances. Thus, even though LTC is strongly linked to health status (e.g. WHO 2015), its focus on assistance with activities of daily living distinguish LTC from HC. Furthermore, in contrast to acute or short-term care needs which are often dealt with in the HC system, LTC becomes relevant if care dependency persists permanently or at least over an extended period of time, for example over a certain number of months.

Similar to HC, (international) social science literature on LTC often resorts to employing definitions developed for certain countries or by international organisations when outlining the phenomenon. The United Nations (UN) and two of its specialised agencies, the WHO and the International Labour Organisation (ILO), as well as OECD, and the European Union (EU) all provide (sometimes several) definitions of LTC in their publications or data documentation. A (non-exhaustive) compilation of these definitions is listed in Table 2. Overall, there is a common focus on persons with impairments needing external assistance. However, when analysing the descriptions of LTC more closely, several differences are apparent. For example, the EU (EC 2013; Social Protection Committee and EC 2014) and OECD (2019) use the concept of ADLs and IADLs explicitly, while the UN (UN DESA 2008) and WHO (2015) definitions are more open/vague by not listing concrete tasks of support. Furthermore, some definitions stress “services” and “activities” as the core of LTC (OECD 2019; OECD, WHO, and Eurostat 2011; WHO 2015), while the UN (UN DESA 2008) and ILO (Scheil-Adlung 2015) speak more broadly of “support”. Similarly, the stated aims of LTC, which are included in three cases, differ in scope. The OECD (2019) and the (similar) System of Health Accounts’ (OECD, WHO, and Eurostat 2011) definition focus on the (physical) condition and health status of care recipients. In contrast, the WHO’s (2015) definition comprises the more comprehensive goal of “[maintaining] a level of functional ability [for
people with or at risk of a significant ongoing loss] consistent with their basic rights, fundamental freedoms and human dignity.” Lastly, a divergence of definition approaches is also evident in the varying inclusion regarding population groups. Notably, some understandings of LTC focus on “older” persons only (e.g. Scheil-Adlung 2015; EC 2013), while most refer to persons in need regardless of age.³

Table 2. Collection of international organisations’ definitions of long-term care

<table>
<thead>
<tr>
<th>Definition</th>
<th>Organisation(s)</th>
</tr>
</thead>
</table>
| “Across the European Union, long-term care for older people refers to a range of services and assistance for persons who over an extended period of time are dependent on help with basic activities of daily living (ADLs) and/or instrumental activities of daily living (IADLs).” […]
“ADLs: Activities of Daily Living are self-care activities that a person must perform every day such as bathing, dressing, eating, getting in and out of bed or a chair, moving around, using the toilet, and controlling bladder and bowel functions.
IADLs: Instrumental activities of daily living are related to independent living and include preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework, and using a telephone.” (EC 2013, 3) |
| EU                                                                                                                                                                                                       |
| “Long-term care (LTC) is defined as a range of services and assistance for people who, as a result of mental and/or physical frailty and/or disability over an extended period of time, depend on help with daily living activities and/or are in need of some permanent nursing care. The daily living activities for which help is needed may be the self-care activities that a person must perform every day (Activities of Daily Living, or ADLs, such as bathing, dressing, eating, getting in and out of bed or a chair, moving around, using the toilet, and controlling bladder and bowel functions) or may be related to independent living (Instrumental Activities of Daily Living, or IADLs, such as preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework, and using a telephone).” (Social Protection Committee and EC 2014, 11) |
| EU                                                                                                                                                                                                       |
| “LTC is mostly needed by older persons with limited ability to care for themselves due to physical or mental conditions and includes, for example, assistance with daily living activities, medication management and basic health services.” (ILO 2017, 108) |
| ILO                                                                                                                                                                                                     |
| “LTC refers to support that is needed by older persons with limited ability to care for themselves due to physical or mental conditions, including chronic diseases and multi-morbidity. The needed support, depending on the degree of limitation, can be provided at home, in the community or in institutions and includes for example assistance with daily living activities such as dressing, medication management but also basic health services.” (Scheil-Adlung 2015, 2) |
| ILO                                                                                                                                                                                                     |
| Long-term care (health and social) consists of a range of medical, personal care and assistance services that are provided with the primary goal of alleviating pain and reducing or managing the deterioration in health status for people with a degree of long-term dependency, assisting them with their personal care (through help for activities of daily living, ADL, such as eating, washing and dressing) and assisting them to live independently (through help for instrumental activities of daily living, IADL, such as cooking, shopping and managing finances).
[Note: This definition is consistent with the definition of long-term care (health and social) under the System of Health Accounts 2011 – HC.3 for the health component and HCR.1 for the social component]. (OECD 2019) |
| OECD                                                                                                                                                                                                    |
| “Long-term care may be broadly defined as material, instrumental and emotional support provided formally or informally over an extended period to individuals in need, regardless of age.” (UN DESA 2008, 66) |
| UN                                                                                                                                                                                                      |
| Also, the UN refers to the WHO definition (United Nations (UN) General Assembly 2018, 3)                                                                                                                   | UN              |

³ However, LTC still excludes care for healthy and non-disabled children, see Lloyd-Sherlock 2010, 130.
Definition

“[Long-term care refers to] the activities undertaken by others to ensure that people with or at risk of a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms and human dignity.” (WHO 2015, 127; see also WHO 2017, 2)

Organisation(s)

WHO

Long-term care (health) (HC.3)

“Long-term care (health) consists of a range of medical and personal care services that are consumed with the primary goal of alleviating pain and suffering and reducing or managing the deterioration in health status in patients with a degree of long-term dependency.” (OECD, WHO, and Eurostat 2011, 91)

Long-term care (social) (HCR.1)

“This item comprises the expenditure on lower-level social care services to assist with instrumental activities of daily living (such as home-help, meals on wheels, transport and day centres, etc.). […] The health and social care components, HC.3 and HCR.1, can be summed up to obtain a total value of long-term care (LTC).” (OECD, WHO, and Eurostat 2011, 114)

Source: Own presentation.

In essence, the comparison of International Organisations’ LTC definitions shows that some are more confined, while others are more open. As we aim for a comprehensive and flexible understanding of LTC to capture diverse (national) settings and contexts, we choose to keep our definition broad. Consequently, we define LTC as a range of services and assistance provided to care dependent persons who need support with daily living over an extended time period due to physical and/or mental impairments. Following the goal stated above, types of impairments, the care-dependent population group, or the exact length of the “extended time period” are not further specified in the definition for reasons of flexible application. Our approach is to follow the institutional set-up and definition of LTC in each individual case as much as possible, while keeping the common focus on LTC as defined below.

Long-term care is concerned with a range of services and assistance provided to care dependent persons who need support with daily living activities over an extended time period due to physical and/or mental impairments.

2.3. Healthcare and long-term care systems

Different definitions of HC systems are found in extant literature. According to Frisina Doetter et al. (forthcoming), HC systems are a ‘conceptual moving target’, which reflects researchers’ choices and interests, taking into consideration period of observation, inclusion criteria, the ordering and operationalisation of variables, selection of cases, and combinations thereof. This myriad of options to conceptualise HC systems and the adaptability of the term make it essential for researchers to delineate the phenomenon in question. Definitions of HC systems (see Table 3) found in the literature on health, comparative social sciences and HC system typologies generally revolve around three different aspects of the phenomenon. First, there is a general perception that a HC system is the sum of all the arrangements to promote, prevent and maintain health (Roemer 1991; Bazzoli et al. 1999; WHO 2007; Freeman and Frisina 2010; Simon 2017; USAID 2020; WHO 2020). Regarding arrangements, the literature highlights all the organizations, activities, resources, and peoples involved in HC. Although the great majority of the definitions focus on formal arrangements, such as health insurers and public institutions involved in HC, informal elements of HC provision are

4 To the point of age as a criterion, we will get back in the next section when defining what a LTC system entails.
considered part of the system by the WHO (2007). The provision of health services is also an aspect used to define the phenomenon: Reibling (2010), for instance, points out that HC systems are concerned with the delivery of services to individuals in need. At last, there is a functional perspective to define HC systems, that is what are the tasks and roles that a HC system has to fulfil? By asking this question, scholarship often arrives at three functions, or dimensions, that a system has to perform to address health needs of individuals and societies (for a detailed discussion, see page 13). This functional understanding of HC systems is adopted by Field (1973), Roemer (1991), Frenk and Londoño (1987), Freeman and Frisina (2010), Quadagno (2010), Wendt et al. (2011) and Simon (2017).

Table 3. Selected healthcare systems definitions found in the literature

<table>
<thead>
<tr>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health system is defined as that aggregate of commitments or resources which any national society “invests” in the health concern, as distinguished from other concerns. The health system is viewed in a structural-functional perspective; it provides services to individuals whose role performance might be jeopardized by ill-health and it occupies a specific structural position in social space.</td>
<td>Field 1973</td>
</tr>
<tr>
<td>Health system is the combination of resources, organization, financing and management that culminate in the delivery of health services to the population.</td>
<td>Roemer 1991</td>
</tr>
<tr>
<td>Health systems offer an array of services and products and have unified asset ownership of affiliated hospitals and other organizational units.</td>
<td>Bazzoli et al. 1999</td>
</tr>
<tr>
<td>Health systems is a set of structured relationships among two major components: populations and institutions (…) The important notion is that the various population groups present a series of conditions which constitute health needs requiring an organized social response from institutions. In every health system this response is structured through a number of basic functions, which institutions have to perform in order to address the health needs of populations.</td>
<td>Frenk and Londoño 1997</td>
</tr>
<tr>
<td>A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities. A health system is, therefore, more than the pyramid of publicly owned facilities that deliver personal health services. It includes, for example, a mother caring for a sick child at home; private providers; behavior change programme; vector-control campaigns; health insurance organizations; occupational health and safety legislation. It includes inter-sectoral action by health staff, for example, encouraging the ministry of education to promote female education, a well-known determinant of better health.</td>
<td>WHO 2007</td>
</tr>
<tr>
<td>The healthcare system is a set of social, economic and political processes concerned with the finance, provision and regulation of healthcare, that is that set of things we categorize as constitutive of ‘the healthcare system’ rather than, for example, the transport system or the political system.</td>
<td>Freeman and Frisina 2010</td>
</tr>
<tr>
<td>Healthcare systems are organizations that both deliver care and medical services (hospitals, physicians’ practices, clinics) and that arrange for the financing of care (governments, agencies, states, local communities, and private insurance companies).</td>
<td>Quadagno 2010</td>
</tr>
<tr>
<td>Healthcare systems are concerned with the provision of services to persons in need.</td>
<td>Reibling 2010</td>
</tr>
<tr>
<td>“[a] social subsystem that is concerned with the maintenance and recovery of health, recognition, healing or alleviation” (Simon 2017: 11). The common features of all healthcare systems are that services must be provided, services must be financed and the actors (the regulators, the healthcare consumers, the cost bearers and the service providers) activities within the system must be organized (cf. Simon 2017).</td>
<td>Simon 2017</td>
</tr>
<tr>
<td>A health system is defined as consisting of all people, institutions, resources, and activities whose primary purpose is to promote, restore, and maintain health.</td>
<td>USAID 2020</td>
</tr>
<tr>
<td>All the activities whose primary purpose is to promote, restore or maintain health.</td>
<td>WHO 2020</td>
</tr>
</tbody>
</table>

Source: Own presentation.
In contrast to the concept of the HC system, an explicit discussion of the term LTC system is largely missing in (comparative) literature. The edited volume by Leichsenring, Billings, and Nies (2013) is one exception where the terminology of LTC systems is reflected upon and used purposefully. Referring to Luhmann’s theory of social systems, the authors argue that LTC is developing as a societal (sub)system with its own “identity” (Billings, Leichsenring, and Wagner 2013, 6–7; Nies, Leichsenring, and Mak 2013, 20). Accordingly, depending on the country at hand, an (independent) LTC system might be more or less present; a LTC system can also be strongly entangled with other (sub)systems, like health and social care, or not (yet) exist. When following this understanding, the existence of a LTC system in any (country) context becomes a matter of empirical investigation. However, this does not help to define and operationalise the phenomenon for international and historical research purposes. Two definitions of LTC systems can be found in the publications of international organisations, namely by the WHO and the EU (see Table 4). However, they both seem to be too specific for our purpose. On the one hand, the EU (Spasova et al. 2018) stresses (partial) public funding as a necessary condition for LTC system existence. On the other hand, the WHO (2017) includes the normative statement that “governments […] should take overall responsibility for ensuring the system’s functioning”. Interestingly, this focus on the role of the public/state in defining LTC systems diverges from definitions of HC systems which do not stress this aspect. We will return to this aspect of public responsibility when defining system introduction below. For now, we will develop a broader definition of HC/LTC systems to fulfil the necessary requirements for studying diverse systems worldwide. To do so, we now turn to briefly outline some general considerations about systems which are helpful in this endeavour.

### Table 4. Collection of international organisations’ definitions of long-term care system

<table>
<thead>
<tr>
<th>Definition</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>“The LTC system is understood as a mix of social and care services, as well as financial compensation – wholly or partially funded through the statutory social protection system – at local, regional and/or national level.” (Spasova et al. 2018, 46)</td>
<td>EU</td>
</tr>
<tr>
<td>“Long-term care systems are national systems that ensure integrated long-term care that is appropriate, affordable, accessible and upholds the rights of older people and caregivers alike. Depending on the national context, funding and care may be provided by some combination of families, civil society, the private sector and/or the public sector. Governments do not need to do everything but should take overall responsibility for ensuring the system’s functioning.” (WHO 2017, 2)</td>
<td>WHO</td>
</tr>
</tbody>
</table>

Source: Own presentation.

‘Systems’ have been discussed and theorized in and across many scientific disciplines, including, notably, the (sociological) work on social systems (see e.g. Bertalanffy 1968; Luhmann and Baecker 2002; Rittmann 2014). As our interest lays in conceptualising HC and LTC systems for cross-time and cross-country research specifically, we will not discuss existing approaches of system theory in detail. Nevertheless, some aspects in the theoretical literature are helpful for conceptualising HC/LTC systems. By speaking of an HC/LTC system, we aim, on the one hand, to emphasize its boundaries vis-a-vis its environment (cf. Rittmann 2014, 38–39; Luhmann and Baecker 2002, 66). This means we analyse LTC systems concerned with the risk of LTC dependency as one branch of social protection differentiated

---

5 However, the authors do not introduce a straightforward definition of LTC systems.

6 Bauch (2006), for example, investigates the question of the existence of a differentiated system for LTC („Pflege“) for Germany in the mid-2000s. He concludes that care can only be regarded as a semi-differentiated system partly overlapping with the HC system and daily life (at this point).
from other social policy fields like HC or old-age income. Regarding HC, we also distinguish HC services from employment injury benefits\(^7\), both in cash and in kind. On the other hand, the term ‘system’ emphasizes the fact that we are studying “a complex of interacting elements” (Bertalanffy 1968, 55). Thus, similarly to Seeleib-Kaiser’s (2002, 751–52) use of the term “welfare system”, a HC/LTC systems encompasses the sum of all societal arrangement dealing with health status or care dependency, respectively.

From the above considerations it follows that all activities and actors that are engaging in the “production” of HC or LTC belong to the HC/LTC system (cf. Mayntz et al. 1988, 30–33). In consequence, the system’s concrete shape may change with (country) context and time. To get a better understanding of the systems’ elements and architecture, we can rely on earlier work which argued that any HC and LTC system involves three dimensions (e.g. Rothgang et al. 2010; Rothgang and Fischer 2019; Burau, Theobald, and Blank 2007; Alber 1995; Fischer, Frisina Doetter, and Rothgang forthcoming; for sources on HC systems, see also page 11). Firstly, the dimension of HC/LTC care provision is the ultimate rational of any HC/LTC system, constituting its basic function. Secondly, financing (or resource input in more general terms) is also a necessity for “producing” care, building the system’s second basic function. Thirdly, the HC/LTC system is integrated through regulation. Regulation can generally be defined as “intervention in the behaviour or activities of individual and/or corporate actors” (Koop and Lodge 2017, 97). While the provision and financing dimension are directly part of the HC/LTC ‘production’, the regulatory structure is equally important as it can modify and change the structure of production through intervention (cf. Mayntz and Scharpf 1995, 16–19).

From these features, we can thus encapsulate our understanding of a HC/LTC system through an organisational view, as the sum of arrangements concerning provision, financing and regulation within a society dealing with the respective social policy field. Before finalising our definitions, two further points have to be discussed, however. Firstly, one of the main differences between HC and LTC is the informal facet of the latter, in particular in the service provision dimension. In fact, the majority of LTC worldwide takes place informally, that is consists of less regulated care provided in the private or family context (WHO 2015). Differently, HC health services are only provided by regulated professions. Therefore, in our definition of HC system the formal aspect of the system is stressed, while the LTC system definition includes both formal and informal arrangements.

Secondly, as already touched upon in the previous section, age is a crucial aspect when studying LTC. Many publications on LTC focus explicitly on elderly (long-term) care and much research discusses and frames LTC with regard to ageing and demographic changes. This focus on older people arguably comes from the higher prevalence of LTC associated with (high) age: old-aged persons are the major group at risk of becoming care-dependent (WHO 2015; cf. Fischer and Rothgang 2020). However, countries have varying approaches towards defining their LTC system’s eligibility criteria regarding age. Some have introduced LTC schemes aimed at elderly persons only or separately from benefits for younger people with impairments, for example Japan and South Korea. Others, like Germany, include all care-dependent persons into the same LTC scheme (Fischer et al. forthcoming). For a cross-country analysis it is consequently important to settle on a definition of LTC systems that is both flexible in capturing diverse approaches and standard-
setting to provide a good basis for comparison. In line with this, we go the route of not limiting but focusing our concept of LTC system on the old-age population. Accordingly, a LTC system in our understanding must comprise LTC for the old-age population as a minimum. This means that other population groups, that is younger care-dependent persons, can be included additionally; yet, the system cannot solely focus on them. This way, we hope to capture the predominant LTC arrangement in each country.  

A healthcare system is the sum of all formal arrangements concerning financing, regulation and provision of qualified health services within a society dealing specifically with healthcare as an area of social protection.  

A long-term care system is the sum of all provision, financing and regulatory arrangements within a society aimed at least at the elderly population, dealing specifically with long-term care as an area of social protection.

3. SYSTEM INTRODUCTION AND MAJOR REFORMS:  
DEFINITIONS AND OPERATIONALISATIONS

In the previous parts, we have discussed the fundamental definitions, which are necessary prerequisites when studying the introducing and development of HC and LTC arrangements in comparative fashion. This section proceeds to present our concrete definitions and operationalisation criteria for measuring system beginnings and major reforms. In addition, we demonstrate our procedure to identify introduction and reform dates using the Uruguayan and Brazilian cases as examples.

The investigation of system introduction is particularly interesting for cross-country comparative research, portraying the emergence, diffusion, and shape of social policies. This focus allows us to identify early and late adopters, order and timing of introduction, and the kind of arrangement put in place. In an explanatory perspective, pinpointing the dates of the emergence of HC and LTC arrangements is crucial to determine why systems have been introduced – i.e. what factors, domestic and/or foreign, led to the establishment of social policies. Further, there is (often) a lack of systematic mapping of system beginning, especially for LTC. Regarding major reforms, identifying paradigmatic shifts allows us to trace the developments in the policy field. In a similar fashion, this exercise can be regarded as a first step to studying and comparing trajectories and influences of (institutional) change.

3.1. System introduction

3.1.1 DEFINITION

Pinpointing when and where HC and LTC systems begin is a subjective call, depending on how researchers choose to conceptualise and operationalise system introduction (Frisina Doetter et al. 2019), and on the availability of empirical information. This subjectivity may lead to divergent introductory dates and result in incomparable data: If study A defines a system introduction in terms of a set of criteria X, and study B conceptualises and measures

8 We abstain from outlining more specific inclusion criteria (e.g. age-thresholds), however, to keep the definition applicable to the institutional set-up in each country.
the beginning of the system in terms of criteria Y, how can their respective findings be compared? (Frisina Doetter et al. 2019). Although this can result in a roadblock to comparative studies, social scientific literature, to our best knowledge, has not done much to address this issue. The difficulties in defining what a system is can be resolved by the measurement of specific policies instead of whole arrangements, such as cash-for-care and immunisation programmes, which may theoretically facilitate the task of identifying the introduction date of an event. The complexity in determining the beginning of any system is due to the fact that systems are a sum of arrangements, and there are seemingly infinite ways to measure its introduction depending on observation period, criteria, and cases (Frisina Dotter et al. 2019). Hence, no conceptualisation or measurement is without limitations, and the ‘best’ solution depends also on the research aims and questions at hand.

As the conceptualisation of system introduction must follow researchers’ interests, our definition of system beginning is concerned with public responsibility; namely, a system in which substantial state involvement in financing, service provision and/or regulation of HC/LTC occurs. Therefore, systems and/or countries that do not have any form of substantial state involvement are deemed to have no system – for example, currently, in Brazil there is no formal substantial public involvement in LTC, and elderly care depends exclusively on the family (Estatuto do Idoso, Law Number 10741/2003). While in theory any kind of state level/agency (e.g. municipalities, regional governments) can be conceived as state involvement, we focus on the national or central state level only. This is a necessary limitation of a cross-country comparative design, as regional variation within states lies beyond the scope here. In our conceptualisation, the initial involvement of the central state is a necessary condition for the introduction of a system. However, this does not exclude non-state actors from having a (substantial) role in the regulation, provision and financing of the respective HC/LTC system as well.

It is important to note that a state intervention in HC/LTC does necessarily constitute the beginning of a HC/LTC system, though. Firstly, as discussed above, our understanding of a HC/LTC system is tied to social protection against the risks of sickness and LTC dependency. Therefore, we define the establishment of entitlements to HC and LTC benefits as an indication of social protection as a further necessary condition for system introduction. Secondly, the complexity of systems has to be accounted for in defining the system introduction. Consequently, integration of the respective HC or LTC systems’ elements constitute the third necessary condition. By entitlement to health or LTC benefits, we understand the demarcation of the population group(s) for which it is potentially possible to receive benefits. The ‘integration’ criterion aims to exclude single policies from our research and capture the ‘sum of arrangements’ facet of a system, as discussed in section two. A system under public responsibility begins at the first point in time which the three conditions are fulfilled. We can thus formally express our definition criteria of a HC/LTC system introduction point as an intersection of the following three necessary conditions:

**First Central State Legislation AND Entitlements to Services AND System Integration**

A health and/or long-term care system under public responsibility is introduced when (a) the first nation-wide legislation is established, (b) entitlements to HC/LTC benefits is enacted, and (c) the elements of the HC/LTC system are integrated.

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9 It is important to note that policy ratification and system introduction may overlap, as the adoption of a pro-gram-me may mean the starting point of a system. Jamaica, for instance, introduced the National Health Services Act (1997) which marks both the introduction of a policy and the starting point of the healthcare system in the country (Cassels, de Carvalho, Frisina Dotter, forthcoming).
3.1.2 Operationalisation and Practical Example

In order to measure system introduction some considerations regarding the operationalisation of the phenomena HC and LTC system have to be discussed as well. To tackle the problem of diverse institutional arrangements across countries, additional guidelines are necessary as to which schemes or programmes can be regarded as HC and LTC systems. An aspect that has been touched upon briefly above is the delimitation of LTC and HC with other social policy fields. This is especially important for LTC as, only in recent decades has it started to be recognized as a separate social policy field (cf. Österle and Rothgang 2010; Greve 2018) and is still not framed as such in many contexts (e.g. Scheil-Adlung 2015; Österle 2011). Therefore, in our operationalisation of LTC systems it is important to stress that LTC dependency itself has to be the main target of any LTC system. That means schemes that are based on characteristics like being of a certain age, having a certain illness or disability, being a veteran or having been injured are not sufficient to constitute a LTC system. Rather, benefits have to be tied explicitly to LTC dependency (as defined above).

Since HC has always been a well-established policy field since the early developments of the welfare state (Flora 1986; Fox 1998), this delimitation between policy areas is less critical than in LTC. However, it is important to note that our operationalisation of HC systems does not account for employment injury benefits (EIB), as we also understand HC as the activities with the purpose of preventing the deterioration of the health status, and EIB focuses solely on work-related accidents and occupation diseases.

Table 5. Operationalisation criteria system introduction

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Operationalisation criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public responsibility</td>
<td>Introduced by nation-wide legislation</td>
</tr>
<tr>
<td>Entitlement to benefits</td>
<td>Definition of the population group for which it is possible to receive benefits</td>
</tr>
<tr>
<td>Public responsibility AND</td>
<td>Entitlements must be established by legislation</td>
</tr>
<tr>
<td>Entitlement to benefits</td>
<td></td>
</tr>
<tr>
<td>Temporal criterion</td>
<td>First nation-wide legislation enacted</td>
</tr>
<tr>
<td>System integration</td>
<td>Existence of an institution or set of institutions explicitly responsible for HC/LTC</td>
</tr>
</tbody>
</table>

Source: Own presentation.

As discussed earlier, we take as the starting point of HC and LTC care systems under public responsibility when (a) the first nation-wide legislation establishing entitlements to HC/LTC benefits is enacted, and (b) the elements of the HC or LTC system are integrated. In order to identify the exact date in which systems have begun, we developed a five-step approach to operationalise system introduction. Firstly, as we are interested in systems under public responsibility, systems must be introduced by any kind of nation-wide legislation, such as laws, decrees and acts. Secondly, this legislation must be the first act enacted addressing the next discussed criteria. Thirdly, system integration is operationalised by the existence of an institution or set of institutions that are explicitly responsible for HC and/or LTC. Fourthly, entitlements to HC and LTC benefits must be established by legislation. Fifth and finally, the entitlements must define the population group(s) for which it is (potentially) possible to receive benefits.
The practical procedure to identify introduction dates encompasses six-steps. Our period of observation for each country starts generally in 1880 with the origin of the modern welfare state in Germany (Stolleis 2013). In the case of former colonies, that is territories “whose domestic and/ or foreign affairs are dominated by [another] nation state, and whose population is constructed as inferior to the colonizer” (Becker 2019, 2), we consider developments only after independence has been achieved. Then, we rely on the judgement of experts, in particular agreement in the extant scholarship, about whether/when a HC/LTC system has been introduced to map possible introduction points. These are extracted and evaluated according to information collected through secondary literature, legislation and experts’ validation, and based on our criteria for system introduction. The earliest date at which all necessary conditions are met is taken as the point of introduction. The procedure is exemplified using the Uruguayan HC system case below (Table 6).

Table 6. System introduction: procedure and example of Uruguay

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Potential Introduction Date I: 1910</th>
<th>Potential Introduction Date II: 1934</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert judgement on when healthcare system was introduced</td>
<td>Government of Uruguay 1913; Puñales 2002; Ferrari 2011</td>
<td>Munoz et al. 2010; ISAGS 2012; Government of Uruguay 2020</td>
</tr>
<tr>
<td>Has been introduced a nation-wide legislation?</td>
<td>Yes (Law No. 3724)</td>
<td>Yes (Law No. 9202)</td>
</tr>
<tr>
<td>Do entitlements define the population group of beneficiaries?</td>
<td>Yes (People suffering with diseases, homeless, disabled and elderly, pregnant women, and children)</td>
<td>Yes (residents of the country)</td>
</tr>
<tr>
<td>Are entitlements established by a legal act?</td>
<td>Yes (Law No.3724)</td>
<td>Yes (Law No. 9202)</td>
</tr>
<tr>
<td>Is there an institution, or set of institutions, responsible for healthcare?</td>
<td>Yes (Consejo de Salud Publica – Public Health Council)</td>
<td>Yes (Ministry of Public Health)</td>
</tr>
<tr>
<td>Is this the earliest date that meets the above criteria?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is this the beginning of the system?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: Own presentation.

There is no general agreement in the literature of when the Uruguayan HC system has been introduced. A review of the scholarship identified two possible starting points: 07.11.1910 and 01.12.1934. The Law No. 37 of 1910 establishes the Public Health Council (Consejo de Salud Pública, in Spanish), and it is the first time that there is a recognition by the state that HC provision to people living in extreme poverty is responsibility of the government. The later date of 1934 is often cited as the birth of the HC system, even by the Uruguayan government, as the law creates the Ministry of Public Health (Ministerio de la Salud Pública, in Spanish). Additionally, it defines health policy competences, organise the system, identify who is entitled to (free) HC and regulates health professions. Although the 1934 law fulfils four of our necessary conditions (integration of the system, establishment of entitlement, public responsibility and entitlements were established by legislation), it does not meet our temporal criterion. Therefore, we identify 1910 as the introduction year of the Uruguayan HC system.
3.2. Major reform

3.2.1 Definition

When studying HC and LTC system arrangements and state intervention in these fields in particular, not only the introduction of a system is of relevance but also subsequent changes. Therefore, by looking at reforms in addition to ‘beginnings’ we are able to trace the development of HC and LTC systems over time, at least to some extent. In contrast to the initial system introduction, the term ‘reform’ is used for every subsequent legal intervention on the topic of HC or LTC in a country. Reforms can take many shapes from minor modifications of existing policies to the establishment of novel entitlement criteria or funding models, for instance. It has to be noted that we conceive of a reform as the change of existing HC and LTC systems as well as the introduction of an additional or replacement of an existing scheme. In our research on HC and LTC systems worldwide, we will not consider any reform but focus on major reforms solely. We are well aware that important changes can also occur through incremental or gradual reforms adding up to big transformations as pointed out, for example, by Thelen and Streeck (2005). However, we employ the threshold of major reforms due to our research goal of comparing HC/LTC system introductions and reforms in a large number of countries from a macro-perspective.

To get an understanding of which reforms should be considered ‘major’, we draw on Hall’s (1993) seminal classification of policy change.10 Therein, the author distinguishes three levels of how policies change with increasing extent of transformation. Accordingly, “third order change” happens if “the instrument settings, the instruments themselves, and the hierarchy of goals behind” are altered (Hall 1993, 279). Put differently, such a large-scale reform occurs when a change in the interpretative framework of policy-making, that is a “paradigm shift”, takes place (Hall 1993, 279–80). Borrowing from this conceptualisation, we conceive of a reform act as major if it – at least potentially – introduces a paradigmatic shift in the existing HC/LTC system. It has to be noted that, as with system introduction, we are looking purely at de jure changes here. That is, while the law introducing a major reform has to involve a paradigmatic shift, there might still be barriers to its implementation and a de facto change of the system. To do so, the reform has to aim at a sustained and substantial change in the logic of at least one of the three dimensions of HC/LTC systems (as defined above) of service provision, financing and/or regulation. Owning to this conceptualisation, expansion or retrenchment – for example in population coverage or extend of benefits – does not generally suffice to constitute a major reform in our understanding. However, if processes of expansion or retrenchment in the HC/LTC system coincide with a substantial change in the logic of provision, financing, and/or regulation we regard this as a major reform. Our definition of major reforms consists thus of one necessary and three sufficient conditions as outlined below:

Central State Law Succeeding System Introduction AND (Substantial Change Logic Provision OR Substantial Change Logic Financing OR Substantial Change Logic Regulation)

A healthcare/long-term care reform is any policy-field related law succeeding the legal introduction of the healthcare/long-term care system.

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10 For an application of Hall’s framework to LTC see Ranci and Pavolini (2013).
To constitute a major healthcare/long-term care reform, the law must (potentially) introduce a paradigmatic shift by aiming at a sustained and substantial change in the logic of at least one of the three dimensions of provision, financing and regulation.

3.2.2 Operationalisation and Practical Example

As previously discussed, we focus on substantial changes in the logic of at least one of the dimensions of HC and LTC. To pinpoint when substantial reforms have been made, we constructed a four-step approach to operationalise major reforms (Table 8). Firstly, in line with our measurement of system introduction, we are solely interested in legislation enacted by central governments. The potential reform must have been ratified after the legislation introducing the system. This is followed by our change in the logic criterion, measured by the transfer of responsibilities from one actor to another in each of the health/LTC dimensions. The operationalisation by means of changing actors stems from our research interest in systems under public responsibilities and defining types of HC/LTC systems according to responsible actors (see for a detailed discussion Frisina Doetter et al. forthcoming; Fischer, Frisina Doetter, Rothgang forthcoming). In this research, we introduce – based on extant literature and deductive considerations – five types of actors which are relevant for providing, financing and regulating HC and LTC: (i) the state, that is the set of public institutions that form the political-administrative system of a given country; (ii) societal actors, that is non-governmental entities entrusted with responsibilities to support the general public interest, such as charities and mutual aid associations; (iii) private collective actors, that is for-profit corporations, such as private insurance companies or hospitals; (iv) private individual actors, including households and, for LTC, provision in informal settings and (v) global actors, that is non-domestic actors representing a range of entities from supranational/international organisations down to foreign individuals and households. An analysis of actors is insightful as they shape the type of LTC and HC arrangement, influencing resource allocation and societal (power) structures, for instance. Changes in logic introduced by reforms are thus considered as changes between these five types of responsible actors. This implies in detail for our three dimensions:

a) Change in the logic of provision indicates that other actors become substantially responsible for providing services. For instance, state run institutions are replaced by private for-profit companies; a large part of societal actor run services are taken over by state operators.

b) Changes in the financing logic entails that actors responsible for financing switch substantially. We operationalise any change in this logic through financial sources: For example, this could be a change from tax-based to contribution-based financing system or the introduction of a substantial additional financing source like a high proportion of co-payments in a previously fully tax-funded system.

c) At last, change in the logic of regulation implies that other actors become substantially responsible in regulation. For instance, the state takes over responsibility for regulating from societal actors or the state mandates private insurances to regulate coverage, benefits etc.

It is important to note that change in actor responsibilities means transfer from one type of actor to another actor type. Therefore, we do not understand, for instance, decentralisation
processes as a logic change, as central government and municipalities/regions are all considered state actors.

**Table 8: Operationalisation criteria major reforms**

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Operationalisation criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reform</td>
<td>Nation-wide law succeeding the legislation that introduces the HC/LTC system</td>
</tr>
<tr>
<td>Paradigmatic shift: Provision</td>
<td>Responsible actors for providing services change</td>
</tr>
<tr>
<td>Paradigmatic shift: Financing</td>
<td>Responsible actors for funding the system change</td>
</tr>
<tr>
<td>Paradigmatic shift: Regulation</td>
<td>Responsible actors for regulating the system change</td>
</tr>
</tbody>
</table>

Source: Own presentation.

Regarding the practical procedure to identify major HC/LTC reforms, we adhere to a six-step process (**Table 10**), exemplified here by HC system reforms in Brazil (**Table 9**). Following our conceptualisation, our period of observation is different for each country, as it begins with the introduction of the system. For instance, the Brazilian HC system begins on January 24, 1923 (Albuquerque 1981; de Carvalho 2020). Given that reforms are laws that succeed the introductory legislation, our period of observation for the Brazilian case starts with this introductory date. Then, our procedure follows a similar structure in identifying system introduction: To determine reform dates, we rely on country experts, analysing existing literature to find potential reform points. These are extracted and assessed according to secondary literature, legislation analysis, experts’ validation and based on our operationalisation criteria — i.e. validation through triangulation. The dates in which all necessary and at least one of the sufficient conditions are met are taken as reform points.

**Table 9: Example major reform – the Brazilian case**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation</td>
<td>Decree Number 4652</td>
<td>Law Number 308</td>
<td>Law Number 8080</td>
</tr>
<tr>
<td>Provision</td>
<td>Societal (Professional Guilds)</td>
<td>Societal (Professional Guilds)</td>
<td>State (central government, states and municipalities)</td>
</tr>
<tr>
<td>Financing (source)</td>
<td>Contribution</td>
<td>Contribution</td>
<td>Taxation (42.27%) Private insurance (28%) Out-of-pocket payments (28.28%)</td>
</tr>
<tr>
<td>Regulation</td>
<td>Societal (Professional Guilds)</td>
<td>Societal (Professional Guilds)</td>
<td>State (central government, states and municipalities)</td>
</tr>
</tbody>
</table>


Existing literature on the development of the Brazilian HC system generally points to two substantial reforms in the country: 13 January, 1937 and 19 September, 1990. Law Number 308 of 1937 creates the Ministry of Education and Health (Ministério da Educação e Saúde, in Portuguese), and establishes regional administrations to supervise and manage local health activities. Although this legislation sets the basis for the restructuring of the health sector in the country, establishing a public institution responsible for organising health services, there are no changes in the logic of any of the dimensions of HC. Therefore, we do not
consider the 1937 changes to the system as a major reform. However, Law Number 8080 of 1990 creates the Unified Health System (Sistema Único de Saúde, in Portuguese), and there is a general consensus among scholars and health experts that this was the most significant health reform in the country. The law sets up universal and free at the point of delivery HC to all citizens and residents of the country, moving away from a social insurance-based system to a national health services system. According to our operationalization, a change in the logic – that is transferred responsibility from one type to another actor type – of just one dimension of HC/LTC meets our criteria for major reform. Law Number 8080 changed the logic in all three dimensions of HC; therefore, it is considered a major reform.

### 4. Conclusion

In this paper, we have presented the definition and operationalisation of key concepts for studying (public) HC and LTC arrangements in global and historical comparative research. The definitions and procedures presented on this paper form the basis of our data sets on where at which points in time HC/LTC systems were introduced and subsequently reformed. The cases of HC system introduction in Uruguay and HC reform in Brazil outlined above demonstrate how decisions on choosing the appropriate points in time are made in our data collection. While this paper has set the conceptual basis for data set construction, further publications will describe data set indicators and sources for all cases in greater detail.

While some aspects of the definitions and ‘measures’ are tailored to our own research focus and aim, we believe the considerations discussed in this paper can also be relevant for other scholars. The article provides a conceptual basis for the study of HC and LTC but can also be of use in other fields of social policy analysis. The questions of how to define system beginnings and reforms may be relevant to all areas of welfare policy. In particular, our conceptualisation might be of use for other social policy fields revolving around welfare services as, for example, childcare, as those are arguably more difficult to pinpoint and study compared to transfer programmes.
We would like to thank Heinz Rothgang, Lorraine Frisina Doetter, Sebastian Haunss, Achim Schmid and Alexander Polte for their suggestions and comments on this research.

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