Developing an Operationalized Framework for Comparing Consumer-directed Care for Older Adults: Evidence from Expert Survey and Cross-national Comparison

Abstract

Consumer-directed care (CDC) programs for older people aim to optimize health outcomes by offering clients control and flexibility regarding service arrangements. However, policy design features may differ due to heterogenous sociostructural systems. By operationalizing a framework with three dimensions of CDC, i.e., *control and direct services*, *variety of service options*, and *information and support*, we analyzed how countries vary in their policy designs to achieve consumer direction. Using an expert survey (n = 20) and cross-national document analysis, we analyzed 12 CDC programs from seven selected countries: the United States, the United Kingdom, Germany, the Netherlands, China, Australia, and Spain. Among the three dimensions, CDC programs placed more emphasis on and displayed more homogenous performance of policy designs that achieve consumer direction in the dimension of *control and direct services*, while less emphasis was placed on and more heterogenous performance displayed in the dimensions of *variety of service options* and *information and support*. We offer a systematically operationalized framework to investigate CDC policy designs. Findings advance our understanding of CDC policy features from a cross-national perspective. Policymakers could incorporate these findings to empower older people in their respective societies.

Keywords: participant-directed care, self-direction, international comparison, cash-for-care, long-term care insurance

Key points

- Consumer direction improves older people's well-being, yet few studies examine how consumer-directed care (CDC) policy should be designed to facilitate consumer direction.
- We provide an operationalized framework to analyze CDC policies across countries.
- Information provision and flexibility in quitting CDC are widely used across countries.
- Flexibility in consuming care-related goods and selecting a mixed model are highly valued by experts but are rarely used in CDC policies.
- Our operationalized framework can serve as a blueprint for countries to assess their own CDC policy.

Introduction

As a crucial component of long-term care (LTC) systems, consumer-directed care (CDC, also known as cash-for-care, individual funding, and self-/participant-directed care) is defined as a service delivery model that empowers care recipients with greater involvement and choice over service arrangements, while diminishing their reliance on social and healthcare professionals (Wiener et al., 2003). Such a model has been embraced to maximize the autonomy and independence of community-dwelling older adults who need support with activities of daily living (ADLs), such as feeding, bathing, and grooming. Empirical evidence has demonstrated that CDC contributes to better care outcomes for older adults, including health status and quality of life (Carlson et al., 2007; Fleming et al., 2019). Policy design is crucial to shaping consumer direction, which can eventually produce positive outcomes for older adults since policies determine the extent to which flexibility, support mechanisms, and service types are available to consumers (Gori & Luppi, 2019). However, existing studies have depicted sporadic aspects of CDC policies, including policy objectives, cost containment strategies, regulations on quality assurance, care worker wages and fringe benefits, and ways by which consumers direct service delivery (Colombo et al., 2011; Da Roit & Le Bihan, 2010; Lundsgaard, 2005; Wiener et al., 2003). Current literature lacks discussion and comparative evidence on how CDC policy designs facilitate consumer direction through a holistic and cross-national comparative approach (Gori & Luppi, 2019; Gross et al., 2015). A comparative framework to examine the metrics in the CDC components could facilitate understanding current CDC implementations and describe unique or similar policy features operated in each country, which could further strengthen the future CDC policy development.

This study aims to operationalize a framework to analyze CDC policy designs and systematically examine an approach that best enables consumer direction across countries. Building on Kosciulek's (2000) conceptualization, we studied 12 CDC programs from seven

selected countries to investigate the similarities and differences among 14 identified policy designs that can promote consumer direction. We proposed our analytic framework after reviewing literature on policy designs of CDC programs and the use of the LTC regime perspective to explain heterogeneity in achieving consumer direction across countries.

An Operationalized Framework for Consumer Direction

Consumer direction refers to "*a philosophy and orientation to the delivery of home- and community-based services whereby informed consumers make choices about the services they receive*" (The National Institute on Consumer-Directed Long-Term Services, 1996, p. 3). Under such a philosophy, three dimensions are essential to facilitate consumer direction in CDC programs (Kosciulek, 2000).[1] The first dimension, *control and direct services*, establishes that consumers, as primary decision-makers, control virtually all aspects of care activities, including implementing service bundle preferences, determining service types and quality of services, and controlling how, when, and by whom services are delivered. To promote consumer direction, this dimension encompasses three policy approaches through eight indicators (Please see Table 1): 1) allocating an adequate budget (indicator 1.1), specifically one comparable with conventional agency care (CAC), to ensure that consumers view CDC as a means to increase self-direction rather than as a compromised option (Crisp et al., 2009); 2) granting consumers autonomy in determining service types so that they can employ informal caregivers (indicator 1.2), determine care worker wages (indicator 1.3), and manage the budget for goods and services (indicator 1.4), including assistive devices and home modifications (Carlson et al., 2007; Crisp et al., 2009; Da Roit & Le Bihan, 2010); and 3) implementing regulations to ensure service quality, especially through consumer feedback (indicator 1.5) (Gross et al., 2015), and, as in some programs deploying a regulatory approach that requires care workers to undergo criminal background checks (indicator 1.6), a contractual approach that specifies care activities (indicator 1.7), and an educational approach that provides training

for care workers (indicator 1.8. More detailed description of quality assurance can be found in Kane et al. (1998)) (Crisp et al., 2009; Kane et al., 1998).

The second dimension, *variety of service options*, encompasses the extent to which the system offers consumers meaningful choices and creates new opportunities outside CAC (Kane et al., 1998). This dimension is captured through three indicators, including restrictions on utilizing CDC, consumers' freedom to return to CAC, and the availability of choices among viable service options. Using CDC to supplement, rather than replace, existing CAC programs expands consumers' service options (Hall & Jennings, 2008). This expansion embraces two policy approaches: allowing consumers to combine CDC and CAC (indicator 2.1) and to return to CAC as they wish (indicator 2.2) (Gori & Luppi, 2019) and, conversely, presenting a single choice between CDC and CAC and imposing restrictions on utilizing CDC by locking consumers into CDC options. Meanwhile, offering a range of options ensures that consumers have available care workers (indicator 2.3); otherwise, consumers cannot freely choose care workers if they are in short supply (Kan & Chui, 2021).

The last dimension, *information and support*, relates to the availability of counseling that informs consumers about their rights, responsibilities, and accessible resources (indicator 3.1). This dimension contains three indicators, also involves assistance on personal, legal, and financial responsibilities associated with CDC options (indicator 3.2). Providing information about CDC programs and care workers helps consumers navigate service options and manage services. Support, mainly referring to fiscal agent services, assists consumers with personal, legal, and financial issues associated with their choices (Moran et al., 2012). Additionally, designating representatives to consumers with cognitive impairments is another form of support that helps them make better care-related decisions (indicator 3.3) (Crisp et al., 2009).

Though policy designs serve as the crucial scaffolding for nations to provide consumer direction, few studies have employed a systematic framework to analyze how policy designs

shape consumer direction. Additionally, the concept of consumer direction has yet to be fully operationalized (Gross et al., 2015; Hooyman et al., 2016). With that in mind, this study contributes to the literature on CDC policy designs by operationalizing Kosciulek's conceptualization, which was originally designed to highlight disability policy designs in a single country, the United States (US), adapting those designs for older adults receiving home- and community-based services, and using them to probe how policy features across countries promote consumer direction. Notably, the framework is specifically developed for older clients using home-based care, while individuals needing LTC but not receiving it are beyond the scope of this study. Our operationalized framework showing 14 indicators from three CDC dimensions is presented in Table 1.

[Insert Table 1]

Long-term Care Regimes and Policy Designs

The heterogeneity in CDC policy features across countries may be analyzed in congruence with the framework of LTC regimes, in that it discusses the role of care provision between family and the state (Kraus et al., 2010). We utilize the LTC regime framework to contextualize our study because CDC is a central service approach in LTC systems, and few studies directly investigate cross-national variations in CDC policy designs. Analyzing CDC policy designs across LTC regimes provides insights into universal and regional aspects of consumer direction, examining the complex variety of CDC policy designs across different countries. Prior studies classified several LTC regimes based on variations in public financing, reliance on paid or unpaid informal care, and levels of public payment for informal care (Applebaum et al., 2013; Colombo et al., 2011; Da Roit & Le Bihan, 2010; Lundsgaard, 2005). First, public financing refers to the extent of state support for LTC. This support can be formal care, paid informal care, or a mix of both. Countries with a high level of public financing for LTC may have high consumer direction as older adults have more publicly subsidized options

(Lundsgaard, 2005). Second, reliance on paid/unpaid informal care relates to the extent to which older adults in a particular country use informal care as the major source of care provision. Third, public payment for informal care facilitates consumer direction by granting participants flexibility in employing care workers close to them, rather than strangers (Carlson et al., 2007).

Based on the three abovementioned policy design features, Lundsgaard (2005) classified countries into five types of LTC regimes. The first type is characterized as having modest public financing and relying heavily on paid informal care, as exemplified by Spain and other Southern European countries. The second type focuses on the role of unpaid informal care in care provision, which can be observed in several programs operating in Hong Kong and major cities in Mainland China (Applebaum et al., 2013). For instance, Hong Kong's Community Care Service Voucher for the Elderly (voucher scheme hereafter) prohibits older people from paying informal caregivers for care.

The other three types of LTC regimes have relatively high financing, but heterogeneity in their payment levels and focus on care provision. For example, the United Kingdom (UK), Germany, and Australia belong to the third type which allocates a considerable amount of financing for informal care. One example is the German cash benefit of LTC insurance, which mainly pays informal caregivers to care for older adults and accounts for 62% of home care expenditures (Nadash et al., 2018). The fourth type, represented by the US and Canada, has an intermediate reliance on, and low public payment for, informal care. In the US, over half of CDC programs impose restrictions on paying for informal caregivers, such as constraining spouses as paid care workers in Arizona's Self-Directed Attendant Care (SDAC) and Arkansas's Independent Choices program (Edwards-Orr et al., 2020). The last type of regime, as practiced in the Netherlands and Nordic countries, has a substantial level of financing for LTC. For instance, in the Netherlands, the public expenditure spent on LTC accounted for 3.7%

of its GDP, which is double the 1.7% spent by other countries in the Organization for Economic Co-operation and Development (OECD, 2017).

Although LTC regimes maintain many vital aspects of CDC programs, such as the role of the family in care provisions, most studies on LTC regimes have incorporated only a few CDC policy designs to classify countries into different types (Applebaum et al., 2013; Kraus et al., 2010; Lundsgaard, 2005). Thus, it remains unclear how CDC policy design features are exemplified across LTC regimes.

The Present Study

Guided by Lundsgaard's (2005) classification of LTC regimes, this study contributes to the current literature in two ways. First, based on previous CDC policy research, we operationalized a framework using 14 policy indicators to study CDC programs across countries. These indicators are widely used in prior studies (Crisp et al., 2009; Gori & Luppi, 2019; Gross et al., 2015). Second, we applied this framework to empirically examine the similarities or differences in the policy features across countries. This study investigates the intersectionality of how policy features vary across 12 CDC programs from seven countries based on Lundsgaard's (2005) classification of care regimes.

The paper is organized as follows. The next section (Stage 1) conducts an expert survey to gauge the relative importance of each indicator, followed by an evaluation of the extent of consumer direction across seven selected countries (Stage 2), followed by the discussion and conclusion. By employing a two-stage research design, our aim is to evaluate CDC programs more effectively. We will achieve this by highlighting the variations in the importance of each policy indicator that facilitates consumer direction and by examining policy designs across countries while considering these variations.

Method

Stage 1: Expert Survey on Policy Designs

Data. To evaluate the extent of consumer direction in these 14 policy designs, we conducted an expert survey to assess the importance of each. Following previous research, expert opinions can be the basis to construct weights to value importance of each policy design in facilitating consumer direction (Dadelo et al., 2014; OECD et al., 2008). First, we developed a questionnaire with all policy design features based on the proposed framework. The experts were asked to rate the importance of each indicator in promoting consumer direction (from 0 *not very important* to 100 *very important*). Second, following prior evidence (Dadelo et al., 2014; Jeste et al., 2010) and to account for the probability of no response, we selected 64 experts in the CDC research field. Selection was based on having at least two scholarly works in academic journals, as well as reports, books, or theses relevant to CDC programs, which had the advantage of reaching more experts than if we had solely considered peer-reviewed publications (Jeste et al., 2010). Next, we distributed the survey via email, and established a final sample of 60 experts (93.8%), as four experts did not possess a valid, public email address. Ultimately, 20 experts completed the survey (response rate: 33%). This response rate is on par with prior studies (Griffiths et al., 2016; Jeste et al., 2010; Kivelitz et al., 2021). The chi-square goodness-of-fit test showed insignificant results in terms of gender and institutional characteristics, suggesting that the respondents who completed the survey did not differ from the recruited experts. Despite this similarity, we cannot ascertain that these experts did not differ in other unobservable characteristics and whether these unobservables would bias our results. The characteristics of these experts are presented in Supplementary Table 2.

Analysis. To obtain the weight, we calculated the mean of the expert rating score for the 14 policy design features and the overall grand mean (i.e., the mean of 14 means). Each policy design's weight was determined by dividing its mean by the grand mean across the 14

indicators and then multiplying it by 100 (overall weight = 100) (Dadelo et al., 2014). For instance, the mean of experts' rating for "benefit amount" was 78.90, while the grand mean of the 14 indicators was 1,011.85. We then derived the weight of "benefit amount" (7.80 = 78.9 / 1011.85 × 100). Each dimension's weight was derived from the aggregated weight of its policy indicators.

Stage 2: Evaluating the Extent of Consumer Direction across Programs

Selections of programs. Based on Lundsgaard's (2005) classification, we selected 12 CDC programs from seven countries—Spain, China, Australia, Germany, the Netherlands, the US, and the UK—for inclusion in our analysis. These countries were chosen as they represent different LTC regimes. Because CDC is one element of LTC system, we aim to capture CDC design variations through covering various LTC models. Although CDC program features may be highly homogeneous within each country, program features in some countries, such as China and the US, cannot be entirely harmonized at the national level as local governments may implement CDC programs with discretion. For example, in the US, programs in California allow older adults to hire spouses to provide care, but programs in Arkansas do not. Since CDC programs in China and the US are locally designed, we selected policies in these two countries for our analysis. We included CDC programs from three cities in China (Hong Kong, Chengdu, and Guangzhou) and four states in the US (California, Washington, Arkansas, and Arizona) as these places had more established programs (Benjamin et al., 2000; Carlson et al., 2007; Kan & Chui, 2021; Sciegaj et al., 2016). Considering the history and coverage of CDC programs, California was chosen for its extensive history of CDC programs dating back to 1978 and for it being the CDC program that served the largest number of CDC clients across the nation (Reinhard et al., 2020). In contrast, Washington (implemented in 1989, ranked 9th), Arkansas (implemented in 1998, ranked 34th), and Arizona (implemented in 2008, ranked 40th) represent CDC programs of varying scale and length of implementation history. In China, Hong

Kong, Chengdu, and Guangzhou were selected because of their comparably generous coverage and the accessibility of policy documents. The 12 programs included in our study were Spain's cash benefit, Hong Kong's community service voucher scheme, Chengdu's and Guangzhou's Personal Budget for LTC insurance, Germany's cash benefit for LTC insurance, the UK's Direct Payment, California's In-Home Supportive Services (IHSS), Arkansas's Independent Choices, Arizona's Self-directed Attendant Care (SDAC), Washington's Medicaid Personal Care, Australia's Home Care Packages, and the Netherland's Personal Budget (see Supplementary Table 1 for details of these programs). Based on the selections, two types of data were collected.

Policy texts. We searched for and collected the latest information on CDC program features from multiple credible sources, including peer-reviewed academic journals and grey literature, such as government documents, NGO websites (e.g., AgeUK), and OECD and European Union publications. We excluded websites designed for commercial use due to the potential for incomplete information. All information retrieved was current as of April 5, 2021.

Analysis. To capture variations in the 14 policy designs and evaluate the extent of consumer direction in selected CDC programs, we followed the method developed by Kraus and colleagues (2010) in assessing the consumer-friendliness in LTC systems and constructed a 3-point scale, in which a score of 3 reflects a system that is the most flexible for consumers, and a score of 1 represents a system that grants consumers minimum autonomy and flexibility. Table 1 presents how each of the 14 indicators across three dimensions was measured. Using employment of informal caregivers as an example, programs that allowed consumers to hire all or some (e.g., excluding co-residing) family members received a score of 3 and 2, respectively. In contrast, programs that forbade the employment of family members received a score of 1. To ensure rating consistency on policy text coding, two researchers (JZ and CS) independently coded subcomponents of each program's features. The values of the intraclass

correlation coefficient (ICC) among 14 policy indicators ranged from 0.96 to 1, indicating satisfactory interrater reliability (ICC > 0.90) (Koo & Li, 2016). Disagreements were further resolved through research team discussions.

Next, we derived each program's overall scores for consumer direction by aggregating the weighted score of each policy indicator. To ensure the robustness of the results, we conducted sensitivity tests using different weighting methods (i.e., equal indicator weight and equal dimensional weight).

We used summary statistics and graphically compared policy scores across programs based on the ranking and the aggregated policy scores. To compare policy scores across the three dimensions that had different measurement units, we standardized the mean (*M)* and standard deviation (*SD*) of each dimension (OECD et al., 2008). The standard mean, i.e., the value of raw mean divided by raw standard deviation, measured the center score on different scales. Meanwhile, the normalized standard deviation represented the relative variability within each dimension, calculated by the raw standard deviation divided by the raw mean.

Results

Stage 1

Results of expert weights on policy designs are shown in Figure 1. Among the three dimensions, *control and direct services* showed the lowest average weight (M = 6.86), whereas *variety of service options* (M = 7.33) and *information and support* (M = 7.72) had higher average weights. Regarding the dimension of *control and direct services*, experts valued one policy indicator, i.e., allowing older people to consume care-related goods, much higher than other indicators, whereas allowing older people to determine wages for their care workers received the least amount of emphasis.

[Insert Figure 1]

In the dimension of *variety of service options*, experts prioritized policies that allowed

older people to withdraw from CDC options, but they placed less emphasis on policies permitting a mixed service model and improving the supply of care workers. In the dimension of *information and support*, providing counseling and fiscal agent services was underscored by experts, while designating representatives received less emphasis.

Stage 2

To investigate how policy designs promote consumer direction across countries, we first described expert weights on the 14 policy designs with the three dimensions of the CDC programs. Next, results on the 12 CDC programs' scores and rankings, and policy design features within the three dimensions, were presented. Finally, variations of consumer direction across LTC regimes were reported.

Overall Evaluation of CDC Programs

We evaluated the 12 CDC programs using the operationalized framework and weights from the expert survey. Table 2 shows the 12 programs' scores and rankings based on the degree of consumer direction; higher scores indicate better consumer direction. The top four programs with the highest scores were Washington's Medicaid Personal Care, Arkansas's Independent Choices, the UK's Direct Payment, and the Netherlands' Personal Budget. The bottom two programs were Chengdu's Personal Budget and Spain's cash benefit. The sensitivity tests using equal dimensional and indicator weighting methods showed that the results remained unchanged (see Supplementary Table 3 for details).

[Insert Table 2]

Table 2 also displays the degree of consumer direction in three policy dimensions across selected CDC programs and their rankings. Among the three dimensions, *control and direct services* had the highest standard mean (M = 6.13) and the least normalized standard deviation (SD = 0.16), indicating a better performance and lower variability of policy designs across programs in enhancing consumer direction. The dimensions of *variety of service options* and

information and support displayed comparably poorer performances and higher variabilities across programs as manifested by their lower standard means (M = 3.53 and 3.72, respectively) and higher normalized standard deviations (SD = 0.28 and 0.27, respectively).

The scores across three dimensions also uncovered some imbalanced emphases on CDC policy design features. For instance, California's IHSS led in the dimensions of *control and direct services* and *information and support* while lagging behind in *variety of service options*. Conversely, Germany's cash benefit led in the dimension of *variety of service options* while lagging behind in *control and direct services* and *information and support*. We found that leaders in one dimension may neglect to incorporate other dimensions in their CDC programs.

Next, we reported on program features of the 14 policy indicators within the three dimensions. As this study focused on how policy designs were used to best facilitate consumer direction, we displayed each policy indicator by highlighting program features that granted the highest consumer direction (score = 3).

Program Features Across Countries

Figure 2 depicts the program features of the 14 policy designs. In the first dimension, *control and direct services*, two policy design features were more commonly used. The contractual approach and the educational approach were the most commonly used to enhance service quality. The number of programs with compulsory requirements for these approaches were 7 and 7, respectively.

[Insert Figure 2]

In the first dimension, the two least adopted policy approaches were flexibly purchasing all care-related goods and providing criminal background checks when family members are absent. Flexibly purchasing all care-related goods was allowed in three programs, including Arkansas's Independent Choices, Australia's Home Care Packages, and the UK's Direct

Payment. Also, the mandatory requirement of providing criminal background checks was established only by the programs in Arizona, California, Washington, and the UK.

Regarding the dimension of *variety of service options*, allowing older people to quit CDC as they wish was more commonly used, while permitting a mixture of CDC and CAC services was the least used option. Older people can quit CDC services as they wish in Arkansas, Arizona, Guangzhou, Germany, Hong Kong, Washington, the UK, and the Netherlands. By contrast, only Germany, Washington, and the UK allowed consumers to integrate CAC and CDC without restrictions. With respect to the availability of care workers as potential alternative caregivers, programs in Guangzhou, Hong Kong, Chengdu, and Spain had larger workforces where one formal care worker served no more than three clients.

In the last dimension, *information and support*, programs under investigation most emphasized providing counseling for older people to facilitate consumer direction, but few programs offered representatives when family members were absent. Specifically, offering information about program and care workers was required in nine programs, such as in Arizona and Australia. Additionally, it was compulsory for fiscal agent services to be provided, free of charge, in six programs: Arkansas, Arizona, California, Guangzhou, Hong Kong, and Washington. To help consumers make care-related decisions, only California, the UK, and the Netherlands offered representatives when family members were absent.

Long-term Care Regimes and Consumer Direction

To uncover how consumer direction varies across regimes, we reported the average score across all dimensions by care regimes. Regimes featured by higher financing, lower reliance on informal care, and lower payment for informal caregivers tended to have higher consumer direction (detailed scores of consumer direction are presented in Supplementary Figure 1 and Table 4). These patterns are largely consistent across all three dimensions of consumer direction, especially for the dimension of *information and support*. Specifically,

regimes with high financing, a modest reliance on informal care, or a modest payment for informal care were more likely to provide high levels of *information and support* to achieve consumer direction. In Supplementary Figure 2 and Table 5, we further depicted how consumer direction across the 14 policy designs differed by LTC regime characteristics.

Discussion

To investigate how CDC programs used policy designs to facilitate consumer direction, this study operationalized a three-dimensional framework of CDC policies to evaluate 12 programs from seven countries. Findings revealed that the top two commonly used policy designs were the mandatory provision of information about programs and care workers and allowing older adults to quit CDC services freely. By contrast, the programs were disinclined to allow a mixed model that combines CDC and CAC, offer representatives when family members are absent, and empower older adults to flexibly consume all care-related goods. These results highlight the specific CDC policy design areas governments should review and improve in order to support consumer direction of older adults.

Providing information and allowing the option to withdraw are widely used among our studied programs. The shared interest in providing information can be interpreted as a growing consensus among policymakers that information helps older people make informed choices (Gori & Luppi, 2019). One possible explanation for adopting the option to withdraw is that policymakers have acknowledged that older people have different capacities for managing personal care, especially when they cannot handle self-direction and need to return to CAC services (Crisp et al., 2009; Ottmann et al., 2013). Owing to policymakers' awareness of older people's informational needs and their diverse capacities for self-direction, programs tend to use the provision of information and the option to withdraw to promote consumer direction.

Few programs grant the highest consumer direction in designating representatives, suggesting that such design feature is often neglected by policymakers. Offering representative

support is less emphasized as family members are typically regarded as representatives. However, consumers' preferences and best interests may not be fully secured, especially when the interests of the caregivers and their older clients do not align, when older people may not express their true preferences for fear of compromising relationships with family members, or when older people have weaker ties with adult children who leave home for work (Crisp et al., 2009).

While the experts allocated the highest weighting to allowing consumers to adopt a mixture of CDC and CAC services, the lack of a mixed model service in practice demonstrates that CDC and CAC are dichotomous choices in most programs. In Spain and Hong Kong, CDC services target beneficiaries in communities without in-kind service supply or those on a waiting list for CAC services. This implies that CDC and CAC are not integrated and remain independent programs targeting different people. Moreover, one major barrier to incorporating consumer direction into CAC services is the resistance from social workers who do not want to relinquish professional control or assume more administrative burden (Manthorpe et al., 2011; You et al., 2017). Accordingly, the mixed model policy is underdeveloped among many of our studied countries.

Notably, our findings reveal the discrepancy that consumption of care-related goods is highly valued by experts, but few programs permit care recipients to consume all care-related goods. This discrepancy may be explained in part by policymakers' concern regarding the misuse of budgets. Policymakers worry that greater flexibility may result in consumers spending their budgets on items not related to personal care (DeCarlo et al., 2018). Though some programs grant consumers flexibility in purchasing care-related goods, policymakers monitor the expense via fiscal intermediaries to meet accountability expectations (Simon-Rusinowitz et al., 2002; Tran & Gannon, 2021). Concerns about the misuse of budgets may impede the adoption of a more flexible option for consumers purchasing care-related goods.

Our results suggest that countries with the same LTC regime characteristics share similarities in some CDC policy designs. However, Lundsgaard's (2005) study on care regime cannot fully explain variations in all 14 policy designs, such as consuming care-related goods and fiscal agent services that are highly valued by experts. Care regimes with different levels of financing and reliance on informal care do not consistently permit flexible purchase of goods or provide fiscal agent services in a similar manner. This suggests that the scope of existing LTC regime research could not fully capture CDC design orientation. As CDC is a central pillar in LTC systems, incorporating CDC features in the conceptualization of LTC regimes can enrich our understanding of the extent to which consumer direction is fulfilled by countries in LTC systems.

Limitations

This study has some limitations. One challenge is that consumer direction is a broad concept that may not be sufficiently operationalized. To address this limitation, this study examined commonly discussed CDC policy designs while acknowledging that some features were measured by proxies and may not be fully addressed. For example, the availability of care workers was measured based on one rule established for adult day care facilities in Indiana, the ~~United States~~US, and had not been widely used in the home-based care literature. This is a compromised choice in the absence of better criteria to follow. Future work can consider measuring the adequacy of available care workers using proxies, such as care workers' wage. Budget adequacy may be gauged by a survey of unmet needs that indicates the adequacy budgets. Future research could capture more CDC features through identifying more indicators with comparable data across countries. Additionally, this study collected mostly published policy texts, particularly ones published in English and Chinese, but did not search for or analyze the unpublished grey literature. Another limitation is that we surveyed a small number of experts and had difficulty obtaining data on more aspects of CDC. As consumer direction

has been highlighted and well-studied in the UK and the US, the selected experts are mainly affiliated with institutions in the two countries. Thus, the expert weight derived from these experts may not represent opinions across various backgrounds. Third, after the expert survey, we operationalized indicators based on policy designs in practice, which may not exactly match some questions (e.g., regulations on designating representatives) in the survey. To ensure the robustness of our findings, we conducted analyses with different weighting methods (See Table S-3), and the results remained largely similar. Fourth, while we investigated CDC programs with varying characteristics of LTC regimes, we acknowledge that our selection of programs through convenience sampling methods, particularly in China and the US, may not fully capture the diversity of CDC programs across the entire nation. Lastly, as policy designs are not static and do evolve and change over time, our analyses offer a cross-sectional, but updated, comparison on contemporary policy features. Despite these limitations, this study is among the first to operationalize a comprehensive CDC policy framework for older adults receiving home- and community-based services and to offer insights on CDC policy features across LTC systems using a cross-national comparative framework.

Conclusion

This study makes multiple contributions to conceptualizing comparative policy. First, we offer a comprehensively operationalized framework to analyze CDC policy designs, thus advancing the conceptualization of consumer direction in Kosciulek's (2000) research, which provides the definition but lacks the operationalization. Second, this study extends Lundsgaard's (2005) and Da Roit and Le Bihan's (2010) work by expanding the scope of CDC policy design features to be examined in cross-national comparative research. Based on findings from expert surveys, our results identify crucial policy design features that achieve consumer direction, such as allowing consumers to freely withdraw from CDC options and to flexibly purchase care-related goods, but which were less examined in previous cross-national

comparative studies. Future research on comparative CDC policies can incorporate this framework of policy instruments to evaluate, contrast, or classify CDC programs.

Our findings also highlighted practical implications for future practice. Our operationalized framework guides policymakers to facilitate CDC and identify overlooked areas in policy design. For instance, countries precluding a mixed model could permit older people to choose personalized options with their preferred level of autonomy and responsibility (Ottmann et al., 2013). Also, programs that did not grant older people flexibility to consume any care-related goods could permit them to flexibly spend budgets, which can satisfy their specific needs and aspirations that are important to their independence (Mahoney et al., 2019). Though policy design needs to be adapted based on local needs and conditions and whether a universal framework is applicable to all conditions is questionable, this study offers a comprehensive framework for countries to review, improve, and localize their CDC policy design to enable consumer direction. The operationalized framework could inform policymakers about selecting, adapting, and prioritizing policy designs to local contexts.

Authors' Notes

[1]Kosciulek's conception includes the fourth dimension, participation in policymaking, which is excluded in our framework. Participation in policymaking refers to levels of consumer participation in policy formation and involves how policy designs are established, whereas the former three dimensions relate to regulations in policy implementation. In other words, this fourth dimension involves consumers' preferences and needs, centering on the extent of consumer direction incorporated at the policy formation stage (Kosciulek, 2000). This is distinct from the other three dimensions in our framework that focus on policy regulations. We exclude participation in policymaking in our proposed framework since our focus is on implemented policy regulations rather than the policy consultancy process.

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Table 1

Framework and Measures of CDC Policy Design

Dimension	Component	Indicator	Description	Score = 3	Score = 2	Score = 1
1. Control and direct services	Resources for control	1.1 Benefit amount	Whether CDC benefit is adequate	Equivalent to CAC/in-kind services or without CAC/in-kind services	Lower benefit than CAC/in-kind services but no co-payment	Lower benefit than CAC/in-kind services and with co-payment
	Determination of service type	1.2 Employment of informal caregivers	Whether consumers are allowed to hire informal caregivers, such as spouse and adult children	Yes	Restricted	Not allowed
		1.3 Determination of care workers' wages and hours	To what extent consumers can reward care workers	Completely determined: both wage rate and hours	Partially determined: only hours	Not allowed
		1.4 Consumption of goods	The kinds of care-related goods consumers can purchase	All kinds of goods if meeting care needs	Government specified goods only	Not allowed
	Quality assurance‡	1.5 Consumer approach: collect information about the quality of care from consumers	The extent of responsibilities authorities have in gathering information about the quality of care	Mandatory: required by the system	Suggested by the system	Not specified
		1.6 Regulatory approach: criminal record for non-relatives	Whether criminal background checks for care workers are used to inform consumers about potential risks	Mandatory: required by the system	Suggested by the system or contingent on consumer request	Not specified

Dimension	Component	Indicator	Description	Score = 3	Score = 2	Score = 1
		1.7 Contractual approach	Whether contracts or care agreements are used to articulate general expectations regarding care workers and the process of delivering services	Mandatory: required by the system	Suggested by the system	Not specified
		1.8 Educational approach: training	Whether training is required to improve care workers' skills and performance	Having at least one mandatory program	All training programs are optional	Not available
2. Variety of service options	System integration	2.1 Mixed model	Whether the combination of CDC and CAC options is allowed	Yes, without restriction	Yes, with restrictions	Not allowed or unavailable
	Restrictions on service use	2.2 Withdrawal option	Whether consumers can choose to quit CDC	Yes, without restriction	Yes, with restrictions	Not allowed or unavailable
	Range of options	2.3 Availability of care workers	The extent of options consumers have over care workers	The number of consumers that one care assistant is serving is no more than 3[†]	The number of consumers that one care assistant is serving is more than 3 but less or equal to 3.5	The number of consumers that one care assistant is serving is above 3.5
3. Information and support	Counseling	3.1 Counseling	Whether counseling is available, including orientation and care workers' information	Compulsory: required by the system	Suggested by the system	Not specified or unavailable
	Fiscal agent services	3.2 Fiscal agent services	Whether personal, legal, and financial support to alleviate consumer's	Compulsory: required by the system and free to	Suggested by the system or with a price for	Not specified or unavailable

Dimension	Component	Indicator	Description	Score = 3	Score = 2	Score = 1
			responsibilities are available	consumers	consumers	
	Representatives	3.3 Representatives	Whether regulations on appointing representatives consider the absence of family members and conflict of interest	Offering representatives when family members are absent	Avoiding persons with conflict of interest as representatives but not offering representatives in absence of family members	Not specified and no regulation on those with conflict of interest as representatives

Note. † The criteria of staffing ratio were derived from Indiana Family and Social Services Administration's (2019) proposed requirement for adult day services. For Basic (Level 1) care, the minimum staff-to-client ratio was 1:3.5, while the figure for Intensive (Level 3) care was 1:3. Our study used 3 and 3.5 as the thresholds for declining adequacy of availability of formal care workers. ‡ To keep variable names concise, we refer to indicators 1.5-1.8 as consumer, regulatory, contractual, and educational approach, respectively.

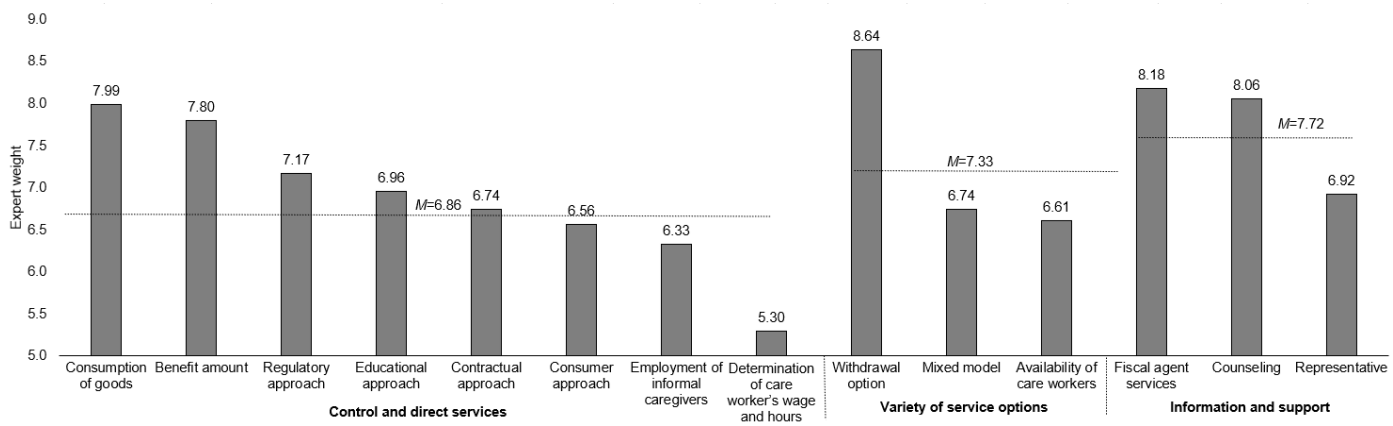
Table 2

Overall Evaluation of 12 CDC Programs

Country/region	Total score (rank)	Mean score (rank) by dimension		
		Control and direct services	Variety of service options	Information and support
Washington (US)	253.32 (1)	144.93 (2)	52.75 (1)	55.64 (6)
Arkansas (US)	252.25 (2)	150.42 (1)	39.27 (7)	62.56 (2)
UK	245.45 (3)	131.40 (4)	52.75 (1)	61.30 (4)
Netherlands	241.99 (4)	128.07 (6)	52.62 (4)	61.30 (4)
Arizona (US)	225.04 (5)	123.21 (7)	39.27 (7)	62.56 (2)
California (US)	223.91 (6)	132.44 (3)	21.99 (11)	69.48 (1)
Guangzhou (PRC†)	208.03 (7)	116.02 (9)	52.49 (5)	39.52 (9)
Germany	206.01 (8)	113.98 (10)	52.75 (1)	39.28 (10)
Australia	200.44 (9)	130.99 (5)	21.99 (11)	47.46 (8)
Hong Kong (PRC†)	187.26 (10)	87.19 (11)	52.49 (5)	47.58 (7)
Chengdu (PRC†)	176.51 (11)	118.14 (8)	35.21 (9)	23.16 (12)
Spain	159.56 (12)	85.07 (12)	35.21 (9)	39.28 (10)
Standard mean	7.01	6.13	3.53	3.72
Normalized standard deviation	0.14	0.16	0.28	0.27

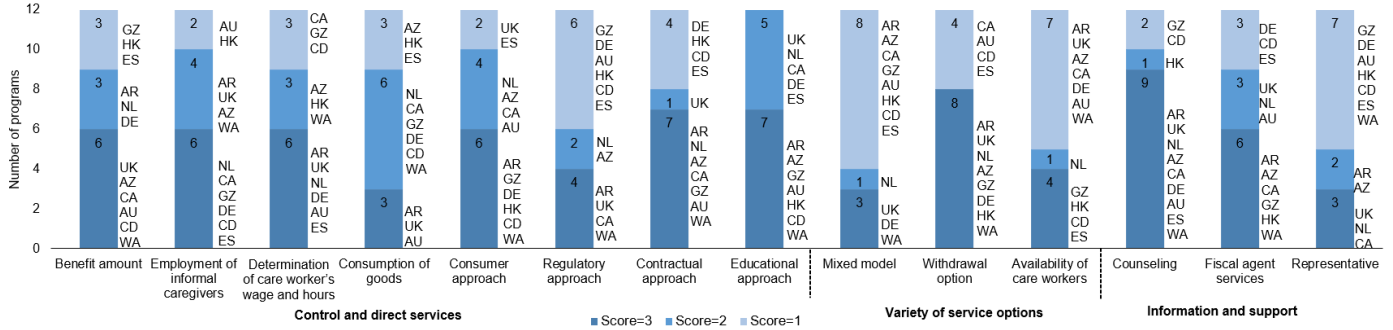
Note. † PRC = People's Republic of China. The weight assigned to each indicator for calculating the overall score is illustrated in Figure 1.

Figure 1. Expert weights



Note. On top of each bar, the mean values are presented. Detailed definition of each indicator is in Table 1.

Figure 2. Program features by the 14 policy designs



Note. AR = Arkansas, AU = Australia, AZ = Arizona, CA = California, CD = Chengdu, DE = Germany, ES = Spain, HK = Hong Kong, GZ = Guangzhou, NL = Netherlands, WA = Washington. The number in each bar refers to the number of CDC programs (among 12 CDC programs) receiving a given score. The meaning of the policy score (1, 2, or 3, as represented by the shade of color) is presented in Table 1. The darker the bar, the higher extent of consumer direction. Detailed definition of each indicator is in Table 1.