

Towards Common Data Elements for International Research in Long-Term Care Homes:
Advancing Person-Centered Care

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ABSTRACT

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2 To support person-centered, residential long-term care internationally, a consortium of
3 researchers in medicine, nursing, behavioral and social sciences from 21 geographically and
4 economically diverse countries have launched the WE-THRIVE initiative to develop a common
5 data infrastructure. WE-THRIVE aims to identify measurement domains that are internationally
6 relevant, including in low, middle, and high income countries, prioritize concepts to
7 operationalize domains, and specify a set of data elements to measure concepts that can be used
8 across studies for data sharing and comparisons. This article reports findings from consortium
9 meetings at the 2016 meeting of the Gerontological Society of America and the 2017 meeting of
10 the International Association of Gerontology and Geriatrics, to identify domains and prioritize
11 concepts, following best practices to identify common data elements (CDEs) that were
12 developed through the U.S. National Institutes of Health/National Institute of Nursing
13 Research's CDEs initiative. Four domains were identified, including organizational context;
14 workforce and staffing; person-centered care; and care outcomes. Using a nominal group
15 process, WE-THRIVE prioritized 21 concepts across the four domains. Several concepts showed
16 similarity to existing measurement structures, while others differed. Conceptual similarity
17 (convergence; e.g., concepts in the care outcomes domain of *functional level* and *harm-free care*)
18 provides further support of the critical foundational work in LTC measurement endorsed and
19 implemented by regulatory bodies. Different concepts (divergence; e.g., concepts in the person-
20 centered care domain of *knowing the person* and *what matters most to the person*) highlights
21 current gaps in measurement efforts and is consistent with WE-THRIVE's focus on supporting
22 resilience and thriving for residents, family and staff. In alignment with the World Health
23 Organization's call for comparative measurement work for health systems change, WE-

24 THRIVE's work to date highlights the benefits of engaging with diverse LTC researchers,
25 including those in low, middle, and high income countries, to develop a measurement
26 infrastructure that integrates aspirations of person-centered LTC.

27

INTRODUCTION

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Defining characteristics of common data elements in relation to existing work

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Recently published position statements by the International Consortium of Professional Nursing Practice in Long-term Care Homes [1] and the International Association of Gerontology and Geriatrics Consensus Group [2] identify critical gaps in our empirical knowledge to support high-quality, person-centered residential long-term care (LTC). From a global perspective, key to accomplishing this agenda is a set of international common data elements (CDEs) that facilitates LTC data sharing and aggregation, improves LTC data quality, and supports common outcomes measures, among other benefits. In this article, we describe our efforts that draw on the National Institutes of Health (NIH) CDE initiative to support CDEs in research, through providing resource guides, an online repository, and supporting the development and use of CDEs in NIH-funded studies, [3] to identify CDEs for research in LTC homes that are relevant across countries and could be used internationally. The World Health Organization (WHO) has identified such comparative measurement work as one of the most critical levers for health systems change [4, 5].

Our efforts to identify LTC CDEs for global use are grounded in a person-centered and strengths-based ethos [6] with the purpose of developing residential LTC systems that support resilience and thriving among LTC residents, families and staff. Our person-centered and strengths-based perspective contrasts with the predominant LTC measurement paradigm, which tends to emphasize frailty and deficits, often with a single-resident focus without accounting for the interactions and outcomes of staff, families, or the larger context [1, 7]. Deficit-based measurement has frequently been deployed with an emphasis on supporting regulatory compliance and reimbursement; importantly, the majority of comparative measurement

50 infrastructures globally have emerged from this paradigm [8, 9]. Recent examples include the US
51 Centers for Medicare and Medicaid's quality measures of post-acute care, such as percentage of
52 residents who were re-hospitalized after a nursing home admission, and/or had an emergency
53 department visit [10], which emphasize outcomes linked to monetary penalties without attention
54 to person-centered care goals [11] or an older adult's trajectory of intrinsic capacity [12].
55 Similarly, England's National Health Service [13] recently implemented an electronic Frailty
56 Index (eFI) as the basis of mandated and compliance-regulated assessment of older people with
57 progressive frailty by General Practitioners. This deficit-focused infrastructure has been ~~and will~~
58 ~~continue to be~~ instrumental in advancing patient safety and care quality. However, the
59 underlying paradigm limits our ability to shift to an international, person-centered LTC research
60 infrastructure that advances and supports well-being and quality of life among older adults, their
61 families and care workers. This shift is consistent with WHO's World Report on Ageing and
62 Health [14] and call for a move towards a focus on capacity rather than frailty.

63 To foster a shift to person-centered, strengths-based LTC research, we have created an
64 international consortium of LTC researchers based in 21 geographically and economically
65 diverse countries, the Worldwide Elements To Harmonize Research In long-term care liVing
66 Environments (WE-THRIVE) consortium. WE-THRIVE's overarching goal is to
67 collaboratively develop an international LTC research measurement infrastructure that can be
68 used efficiently in diverse, residential LTC settings for comparative research to advance person-
69 centered care for resilience and thriving among residents, staff, and family members. To achieve
70 this overarching goal, our work is carried out in two sequential phases. The first phase focuses
71 on identifying fundamental measurement domains and concepts of residential LTC that are
72 important internationally, and the second phase focuses on establishing consensus on core data

73 elements to measures concepts within each domain. This paper reports the process and findings
74 related to phase one.

75 **APPROACH TO CONSENSUS-BUILDING**

76 WE-THRIVE's overall approach is guided by best practices in CDEs developed by the
77 U.S. National Institute of Nursing Research-funded symptom science research centers [3]. Their
78 approach, developed in alignment with The International Organization for Standardization (ISO)
79 and International Electrotechnical Commission's standards for metadata registries [15],
80 encompasses three broad activities for developing and using CDEs, including ensuring
81 conceptual consistency, implementing group processes for identification and selection, and
82 developing data collection and management protocols.

83 WE-THRIVE was initiated in November 2016; to date, we have engaged in a
84 comprehensive, multi-step group process to identify core measurement domains of residential
85 LTC and corresponding concepts (phase 1), which will inform the future selection of data
86 elements, and the development of data collection and management protocols (phase 2). The
87 consortium includes 59 researchers from 21 countries, including researchers from lower-middle,
88 upper-middle, and high- income countries who are conducting research in diverse settings of
89 residential LTC. While the majority of participants are from only 2 of the 21 countries (US=14;
90 UK=11), there is a relatively equal distribution of researchers from the Americas (21), Europe
91 (17), and the Western Pacific and Southeast Asia (21) regions. We do not yet have collaborators
92 from the Eastern Mediterranean and African WHO regions. Regarding discipline, the majority
93 of participants are from nursing (N=43); other represented disciplines include medicine (N=5),
94 and social and behavioral sciences (N=11). Our inclusive approach is congruent with the ISO
95 Action Plan for Developing Countries [16], developed in alignment with the United Nations'

96 Sustainable Development Goals [17].

97 **Identifying International LTC Measurement Domains**

98 WE-THRIVE's phase 1 work to identify measurement domains and concepts has
99 included: beginning with convening as a group in 2016 to generate domains; forming domain
100 sub-committees and conducting a series of eight steering committee and nine domain sub-
101 committee meetings; and convening again as a full group in 2017.

102 *Convening workshop: Generating Domains.* WE-THRIVE first convened in a half-day
103 workshop at the 69th annual meeting of the Gerontological Society of America (GSA) in
104 November, 2016, in New Orleans, Louisiana. Sponsored by the GSA Interest Group on LTC
105 Systems Research, participants included 27 LTC researchers from 11 countries, including
106 Canada, China, Japan, Korea, Norway, Spain, Sweden, Switzerland, Thailand, the United
107 Kingdom, and the United States. Participants were invited through GSA's pre-conference
108 workshop marketing materials, the GSA Interest Group's list-serv, and one-on-one invitations by
109 interested Interest Group members to non-members who have previously conducted research in
110 the LTC measurement arena. During the workshop, we reviewed NIH's CDEs framework,
111 conducted breakout group discussions regarding critical domains for LTC measurement, and
112 reached consensus on four domains for LTC measurement that are salient internationally,
113 including: (1) organizational context (external and internal to the residential care setting), (2)
114 workforce and staffing, (3) person-centered care, and (4) care outcomes. Following the GSA pre-
115 conference workshop, WE-THRIVE membership expanded as participants reached out to discuss
116 the session with colleagues who were not present at GSA, and who expressed interest in the LTC
117 CDEs development work.

118 *Post-workshop effort: Refining Domains, Engaging Stakeholders and Generating*

119 *Concepts.* Between GSA and the 21st meeting of the International Association of Gerontology
120 and Geriatrics (IAGG) in July, 2017, WE-THRIVE members met in sub-committees
121 representing the four domains using a computer-based video-conference platform to begin
122 identifying important measurement concepts within each domain. Each domain committee
123 included chairs or co-chairs who facilitated domain-specific discussions. Domain-specific
124 discussions focused on potential concepts in each domain that were common to LTC settings
125 across represented countries. The domain committee chairs met in monthly WE-THRIVE
126 steering committee meetings to report updates and share challenges and ideas across subgroups.

127 Because of the group's commitment to global inclusiveness, a standing item for the
128 steering committee and the domain committee meetings was to identify new WE-THRIVE
129 members, especially those from low and middle-income countries (LMICs), to vet the work to
130 date. We reviewed professional networks to identify LMIC-based colleagues for one-on-one
131 outreach; two of the schools represented by the steering committee are WHO Collaborating
132 Centres with enhanced networks. New colleagues were invited to attend distance-based
133 meetings via computer conference calls. IAGG marketing and communications disseminated
134 information globally about our second workshop; we provided limited scholarships to LMIC
135 colleagues to support attendance, as well as encouraged those who could not attend to continue
136 to participate asynchronously pre- and post- the IAGG workshop. We built an inclusive, flexible
137 network of researchers with ongoing participation through face-to-face or distance-based
138 technology that was not limited to researchers who could attend IAGG 2017. This approach is
139 consistent with the ESSENCE on Health Research initiative's principle of building collaborative
140 networks to strengthen LMIC research capacity [18]. Through this effort, WE-THRIVE
141 membership continued to expand in size and diversity.

142 *Second workshop: Nominal Group Process for Concepts.* Building on the GSA
143 workshop and the domain committee work, WE-THRIVE convened in a full-day pre-conference
144 workshop—*Common Data Elements for International Research in Long-Term Care*—at IAGG
145 in San Francisco on July 23, 2017. This workshop was open to all; participants included 55 LTC
146 researchers from 13 countries, including 4 LMICs.

147 Drawing upon all previous activities related to identifying core domains and concepts, the
148 consortium adopted a nominal group technique [19-21] to further specify a set of measurement
149 concepts within each of the four domains. The nominal group technique is a structured group
150 process to prioritize ideas and build consensus using both silent, idea-generation and group
151 discussion phases; it has been used previously by international groups for consensus-
152 development in both research and non-research settings [22, 23]. This approach is consistent
153 with the consortium’s inclusive approach to ensure all participants can contribute their
154 perspectives in a way that does not privilege any one culture’s engagement style.

155 We convened the workshop by reviewing WE-THRIVE goals, presenting summaries of
156 the background work to date, including descriptions of the domains, and describing the steps of
157 the nominal group process. Next, participants selected a domain group to join and domain
158 committee chairs facilitated the domain-specific nominal group process. Nominal group
159 facilitation was standardized in two ways. First, a nominal group process implementation
160 manual was developed for use by the domain group chairs. Second, each domain chair was
161 assisted by a graduate student or post-doctoral research fellow who was trained in using the
162 manual prior to the workshop. Domain groups completed the following six steps: individual,
163 silent generation of possible concepts within a domain (step 1); group turn-taking to share all
164 ideas and eliminate any duplicates (step 2); group discussion and feedback of generated concepts

165 (step 3); individual, confidential voting for the top 5 concepts considered the most important to
166 measure across LTC settings internationally (step 4); tally of votes assigning rank scores of 5 to
167 1 for each individual's ranked concepts from highest ranked concept (score of 5) through fifth
168 ranked concept (score of 1) (step 5); and discussion of results (step 6). These steps were
169 followed by a full-plenary session reporting out and discussion of the within-domain group
170 results. Bringing domain group results to the full plenary for discussion facilitated a vetting of
171 candidate concepts within each domain by all researchers participating in the workshop across 13
172 countries, rather than the subset of researchers within each domain subgroup.

173 Through the nominal group process, we established consensus on a key set of
174 measurement concepts within each domain and identified cross-country differences in the
175 importance or meaning of the measurement concepts. Throughout the subgroup discussions,
176 domain chairs ensured concepts identified by partners who were not present at IAGG were
177 discussed, and encouraged participants to ask questions and share divergent perspectives. As an
178 additional strategy for inclusivity, participants were encouraged to write on boards around the
179 room any thoughts not captured during the nominal group process, organized in accordance with
180 MyHomeLife's [24] Collaborative Sensemaking Tools ([http://myhomelife.org.uk/wp-](http://myhomelife.org.uk/wp-content/uploads/2014/11/Collaborative-Sense-Making-Tool.pdf)
181 [content/uploads/2014/11/Collaborative-Sense-Making-Tool.pdf](http://myhomelife.org.uk/wp-content/uploads/2014/11/Collaborative-Sense-Making-Tool.pdf)).

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183 RESULTS

184 Nominal Group Process: Domains and Concepts

185 Across the four LTC domains, participants prioritized 21 measurement concepts for
186 which CDEs could efficiently support international research on critical LTC issues. Within each
187 domain, the workshop participants prioritized five concepts. Table 1 summarizes the prioritized

188 concepts following the nominal group process. Total rank score for each concept reflect the sum
189 of rank scores across all domain group members. Because we established a priori that
190 participants should vote for the top 5 priority concepts, domain groups varied considerably in
191 terms of the extent to which all 5 concepts were selected as of relatively equal weight (that is,
192 total rank scores were similar) versus domains with 1 or 2 concepts for which there were
193 markedly higher ranking scores, relative to the remaining prioritized concepts.

194 **Organizational context.** Within the Organizational Context domain, participants (N=7)
195 from China, Japan, Sweden, the United Kingdom and the United States generated 87 candidate
196 concepts as relevant to the organizational context of residential LTC in their countries. Six
197 concepts were prioritized as most important to measure. All six concepts were endorsed by the
198 full plenary (Table 1). Concepts included *social resources and support* for the organization;
199 *regulations* that affect the organization; characteristics of *funding* of care; organizational
200 *leadership hierarchy and role*; as well as the *interface between leadership and management*; and
201 characteristics of a *desirable working environment*. Of these concepts, external contextual
202 factors of social resources and support, regulation, and funding, were given similar ranks by
203 participants (sharing 20%, 20%, and 14 % of total rank scores, respectively), and ranked higher
204 overall than internal contextual factors related to concepts of leadership and work environment.

205 **Workforce and staffing.** Within the Workforce and Staffing domain, participants (N=8)
206 from Brazil, Canada, Norway, the United Kingdom, and the United States generated 85
207 candidate concepts as relevant to workforce and staffing in residential long-term care in their
208 countries. After clarifying and prioritizing discussions, five measurement concepts were
209 prioritized as most important to measure and were endorsed by the full plenary (Table 1).
210 Concepts included *staff skills, attitudes, and knowledge* in relation to residents' needs; *staff*

211 *collaboration and teamwork*, which was discussed as including supervisory control and feeling
212 supported; *training and self-efficacy of staff*, including educational opportunities; *staff retention*
213 *and turnover*, including staff's sense of feeling valued, wage competitiveness, and the desire to
214 stay in the job; and *leadership and supervisory effectiveness*, including delegation and task
215 allocation. Staff skills, attitudes and knowledge was ranked higher overall than all other
216 workforce and staffing concepts, as the dominant concept from this domain, garnering 30% of
217 total rank scores.

218 **Person-centered care.** Within the Person-Centered Care domain, participants (N=12)
219 from Canada, China, Japan, South Korea, Thailand, the United Kingdom, and the United States
220 generated 112 candidate concepts as relevant to person-centered care in their countries. Through
221 the clarification and voting process, five measurement concepts were prioritized as the most
222 important to measure and were endorsed by the full plenary (Table 1). Concepts included
223 *relationship*, with consideration for relationships among all persons who are part of the
224 residential care settings, including residents, staff, and family; *knowing the person*; identifying
225 and addressing *what matters most to the person*; supporting *meaningful engagement*; and
226 supporting a *positive environment*. Relationship was the primary concept ranked as most
227 important in this domain, with 21% of total rank scores, followed by knowing the person, with
228 13% of scores. All other concepts had considerably lower proportions of scores.

229 **Care outcomes.** Within the Care Outcomes domain, participants (N=11) from Hong
230 Kong, Jamaica, Japan, Sweden, Switzerland, the United Kingdom and the United States
231 generated 122 candidate concepts as relevant to care outcomes in residential long-term care in
232 their countries; five concepts were prioritized through the discussion and voting process as most
233 important to measure. All five were endorsed by the full plenary (Table 1). Concepts included

234 *symptom management*, especially pain management; *functional level*; *well-being*; *personhood*,
235 which was discussed as, ‘letting people be people’; and *harm-free care*, which was discussed as
236 the absence of several avoidable, adverse outcomes, including pressure ulcers, falls, and
237 medication errors. Symptom management was the highest ranked concept, with 20% of total
238 possible rank scores. Functional level and well-being also were higher, with similar rankings of
239 16 and 14% of total rank scores, respectively.

240 **Collaborative Sensemaking Themes: Ideas for Reflection**

241 Participants posted 71 comments on boards in the meeting room during the nominal
242 group process session. Of these, two sets of comments raised unique issues that were not
243 otherwise discussed during the nominal group process and therefore not captured in the final set
244 of ranked concepts. The first set (N=8 comments) identified barriers to inclusion in the WE-
245 THRIVE process; this was the largest set of comments. Identified barriers included the
246 following: meeting attendance costs and time away from home institutions pose significant
247 barriers for face-to-face LMIC-based researchers’ participation; the assumption of the
248 importance of person-centered care as culturally embedded and difficult to challenge; the risk
249 that one may lack effective strategies to explore ontological assumptions in others’ worldviews
250 and therefore focus on what is relevant to one’s culture alone; and the tension between making
251 decisions to move forward as a group and the need for ongoing, iterative engagement, especially
252 with LMIC-based researchers, over time. The second set (N=6 comments) pointed out the
253 importance of recognizing and challenging our underlying assumptions about the role of families
254 in LTC settings as positive and desired. For example, comments included discussion of how
255 families may not always be desired by residents in care settings.

256 **IMPLICATIONS FOR PRACTICE, POLICY AND/OR RESEARCH**

257 Advancing a parsimonious set of CDEs that could be applicable across diverse residential
258 long-term care settings internationally, requires questioning the extent to which our current
259 measurement paradigms embrace more global aspirations to support thriving among older adults,
260 their families, and care staff. Our WE-THRIVE Consortium identified four domains with related
261 concepts for measurement that both converge and diverge with the predominant, deficits-based
262 framework. Convergence and divergence were defined as the degree to which our findings agree
263 or disagree with residential long-term care measurement constructs from extant research using
264 other approaches, consistent with a mixed-methods approach to integrating data [25, 26].
265 Concepts that converge with extant measurement efforts ~~Convergence~~ highlight the critical
266 foundational work in long-term care measurement conducted by researchers and endorsed and
267 implemented by regulatory bodies, such as InterRAI,[27]. Concepts that diverge ~~yet divergence~~
268 invite us to consider key gaps needed to specify a person-centered, strengths-based measurement
269 framework that can be meaningfully applied internationally.

270 The Organizational Context domain working group identified key parameters historically
271 captured in organizational studies of residential long-term care settings, such as regulation and
272 funding (see, for example [28]), but also prioritized components of the social context of care,
273 leadership and the work environment. This prioritization is consistent with more recent
274 measurement and empirical work of the context of care from non U.S.-based research teams,
275 such as Estabrooks et al's [29] work identifying eight contextual concepts of residential long-
276 term care settings that have been related to outcomes such as symptom burden.

277 Similarly, the Workforce and Staffing domain working group endorsed historically
278 relevant concepts of staffing ratios or turnover in long-term care, while highlighting the extent to
279 which staff are integrated into teams with effective leadership support and opportunities to learn.

280 This latter emphasis also is consistent with recent findings from non U.S.-based research teams,
281 about the direct effects of how staff are supported and developed on both staff and resident care
282 outcomes [30].

283 The Person-centered Care domain working group coincided with U.S. DHHS/CMS
284 issued regulatory changes that require documentation of resident preferences for person-centered
285 care [31]. Our findings indicated that measuring preferences, while salient, was not ranked in the
286 top five concepts. The highest ranked concept, relationships, was the predominant concept of
287 person-centered care. This finding is consistent with more recent international statements of the
288 quality of relationships, or relationship-centered care, as fundamental drivers of person-centered
289 care in residential LTC [1].

290 Similarly, during a time of important growth in technical capacity to support expansion of
291 MDS-like data registries across multiple countries [32], the Care Outcomes domain working
292 group prioritized conceptually consistent measures of functional level and harm-free care, which
293 was operationalized as the absence of a variety of avoidable, adverse outcomes such as pressure
294 ulcers and falls, that are commonly associated with outcomes indicators [10]. This
295 operationalization relates to the National Health Service in England's harm-free care composite
296 measure that draws upon pressure ulcers, falls, urinary tract infection, and venous
297 thromboembolism [33]. The working group also prioritized symptom management as most
298 important, and added well-being and personhood. These latter concepts are consistent with the
299 European Union's framework of the PROGRESS Programme's recommendations for residential
300 LTC measures [35]. Findings support the importance of refining how symptom experience and
301 symptom management are meaningfully included, as well as understanding the
302 interconnectedness of care outcomes with personhood to ensure quality of life.

303 The construct of functional level in the care outcomes domain also relates to the WHO
304 operationalization of functional capacity [12], which arises from an older adult's intrinsic
305 capacity in relation to environment and contrasts with a frailty and deficits-based model. Situated
306 in a broader international debate that is starting to emphasise constructs such as resilience [34] as
307 having explanatory value in care of older adults, consideration of intrinsic capacity and resilience
308 in our next steps may facilitate moving beyond historic approaches to capturing function in a
309 way that is consistent with the strengths-based ethos of WE-THRIVE.

310 Next steps to accomplish the larger goal of WE-THRIVE include building on these initial
311 efforts to move from candidate concepts to well-defined concepts with measures that have been
312 broadly vetted across diverse socio-cultural contexts and with multiple LTC stakeholders. The
313 purpose of CDEs is not to generate a comprehensive battery of recommended measures, but
314 rather to endorse a parsimonious subset of data elements that can be embedded within current
315 and future LTC research data collection efforts. Such vetting and selection will require in-depth
316 consideration of issues of inclusion to foster transparency and deliberative dialogue of
317 underlying assumptions within each domain, addressing the limitations raised by participants in
318 our collaborative sensemaking exercise as well as in previous studies of limitations in cross-
319 cultural measurement efforts. [36, 37]

320 Therefore, it will be essential to engage with stakeholders in residential LTC settings,
321 including direct care staff, residents and their families, consistent with established frameworks
322 for patient and public involvement (e.g., the UK National Institute for Health Research's
323 National Standards for Public Involvement [38]). Drawing upon Huber et al [39], we might
324 anticipate that domains may be weighted differently by stakeholder perspective, concepts within
325 domains may be ranked differently, and that there may be omitted domains and/or concepts.

326 Additionally, we will need to engage with more researchers based in LMICs, including
327 countries from the Eastern Mediterranean and African WHO regions, and strengthening the
328 interdisciplinarity of the consortium, while employing new strategies of engagement that move
329 beyond more traditional academic-researcher approaches to international research collaborations.
330 For example, modest scholarships do not effect systemic barriers to travel to international
331 conferences where our working sessions have been conducted, video-conferencing does not
332 ameliorate a lack of slack resources to engage in domain working groups in an ongoing basis,
333 and engaging in a consortium with a previously-developed platform necessarily limits
334 opportunities to raise issues of domain and concept equivalence across different ontological or
335 axiological worldviews.

336 Ultimately, our ability as a scientific community to support a rapidly evolving, global
337 residential long-term care infrastructure will require new ways of engaging with our peer-
338 researchers across low, middle and high income countries, and the development of a
339 measurement infrastructure that integrates aspirational perspectives of thriving and resilience in
340 aging. The WE-THRIVE Consortium's work to date indicates both the potential of this
341 approach to begin to build inclusive global networks, as well as our shared capacity to leverage
342 and enhance, rather than replace, existing measurement tools.

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Table 1.

Domain Concepts and Prioritization Rank Scores (N=55 plenary participants)

Domain	Concept	Rank Scores (%) ¹
Organizational Context (N=7 participants)	1. Social resources and support	21 (20.0)
	2. Regulation	21 (20.0)
	3. Funding	15 (14.3)
	4. Leadership hierarchy and role	10 (9.5)
	5. Leadership & management interface	9 (8.6)
	6. Desirable working environment	9 (8.6)
Workforce and Staffing (N=8 participants)	1. Staff skills, attitudes, and knowledge	36 (30.0)
	2. Staff collaboration and teamwork	17 (14.2)
	3. Training and self-efficacy of staff	16 (13.3)
	4. Staff retention and turnover	11 (9.2)
	5. Leadership and supervision effectiveness	9 (7.5)
Person-Centered Care (N=12 participants)	1. Relationship	39 (21.2)
	2. Knowing the person	24 (13.3)
	3. What matters most to the person	13 (7.2)
	4. Meaningful engagement	12 (6.7)
	5. Positive environment	9 (5.0)
Care Outcomes (N=11 participants)	1. Symptom management	33 (20.0)
	2. Functional Level	26 (15.8)
	3. Well-being	23 (13.9)
	4. Personhood	16 (9.7)
	5. Harm-free care	9 (5.5)

¹ Rank score percentages do not total 100, as only the 5 highest scoring concepts are presented in the table