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## Review Article

# Interprofessional Collaboration in Long-Term Care and Rehabilitation: A Systematic Review



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## A B S T R A C T

**Keywords:**

Interprofessional collaboration  
interdisciplinary  
long-term care  
geriatric  
rehabilitation  
elderly  
facilitators  
barriers

**Objectives:** To examine facilitators of and barriers to interprofessional collaboration (IPC) in institutional long-term care (LTC) and geriatric rehabilitation (GR), and to provide an overview of instruments used to assess IPC in LTC and GR.

**Design:** Systematic integrative review.

**Setting and Participants:** Institutional long-term care and geriatric rehabilitation.

**Methods:** We systematically searched relevant databases for articles using the terms *interprofessional collaboration*, *interdisciplinary*, *long-term care*, *geriatric rehabilitation*, *elderly*, *facilitators*, and *barriers*. We conducted a systematic integrative review following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis method. Papers containing empirical data about barriers to and facilitators of IPC in LTC and GR were included. The Mixed Method Appraisal Tool was used for quality assessment. Data were analyzed using qualitative thematic analysis.

**Results:** Three interdependent themes regarding facilitators of and barriers to IPC emerged: Team performance, Organizational conditions, and Sharing information. Eight instruments were used to assess IPC in LTC and none for GR. Limited descriptions and insufficient psychometric qualities of the instruments were reported.

**Conclusions and Implications:** To enhance IPC, it is necessary to stimulate facilitators and limit barriers on all 3 themes. Furthermore, a reliable, validated instrument to assess IPC in LTC and GR, based on a clear definition of IPC is needed. Successful IPC when caring for patients with multimorbidity in LTC and GR requires integration, understanding, and recognition of the interdependency from all persons involved, including patients and family caregivers.

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Multimorbidity is common in older patients in institutional long-term care (LTC) and geriatric rehabilitation (GR).<sup>1–3</sup> Older patients with multimorbidity are affected by the complexity of more than one chronic disease during a certain period of time, are known to have poorer quality of life, an increased risk of functional decline, and increased morbidity.<sup>2,4,5</sup> To be able to provide the best care possible, these older patients, because of the complexity of multimorbidity, need comprehensive care by multiple health care professionals.<sup>3,5–9</sup> This necessitates an approach that enables optimal collaboration between health care professionals from various professional

disciplines.<sup>3,6,7,10–18</sup> The World Health Organization (WHO) defines interprofessional collaboration (IPC) in health care as multiple health workers from different professional backgrounds providing comprehensive services by working with patients, their families, carers, and communities to deliver the highest quality of care across settings.<sup>19</sup>

To accomplish IPC in LTC and GR, health care professionals are faced with profound challenges. Because of their monodisciplinary education, they are used to functioning within their role boundaries.<sup>12,13</sup> Health care professionals also have their own treatment preferences and speak their own professional language.<sup>14</sup> Appreciation of other professionals' roles, and recognizing the importance of interdependence is often challenging in practice, because of the limited knowledge of each other's professional competences.<sup>20</sup> To accomplish effective IPC in order to optimize comprehensive care for older patients with multimorbidity, effective communication and beneficial relationships are a prerequisite.<sup>21,22</sup> To date, research on IPC has focused mainly on primary care, and hospital settings in which patients generally are treated for medical care over short time periods.

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In comparison, older patients in LTC and GR are affected by multimorbidity and geriatric syndromes requiring treatment for multiple and extensive time periods. The complexity involves multiple domains (eg, medical, physical, psychological, and social), which necessitates comprehensive treatment by professionals with complementary knowledge, collaborating for an extensive time period.<sup>3,23,24</sup>

With insight into facilitators of and barriers to IPC in LTC and GR, we can optimize collaboration to improve care for the increasing complexity in older patients with multimorbidity.<sup>3,6,7,10–18</sup> This study focuses on identifying facilitators of and barriers to IPC in LTC and GR. The primary aim of this systematic review is to examine the facilitators of and barriers to IPC in LTC and GR settings. A secondary aim is to provide an overview of instruments used to assess IPC in the LTC and GR. This study provides recommendations that can guide decision makers and care practice in the LTC and GR.

## Methods

This review used a systematic approach following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guideline for the identification of articles,<sup>25,26</sup> and an integrative review methodology<sup>27–29</sup> to allow for a synthesis of qualitative, quantitative, and mixed methods empirical studies relevant to the research

question. In this way, findings were maximized to gain knowledge on facilitators of and barriers to IPC. The flow diagram in Figure 1 displays the selection process. The protocol of this systematic review was registered at PROSPERO International prospective register of systematic reviews at the University of York Centre for Reviews and Dissemination on July 5, 2020 (registration no. CRD42020177696).

## Search Strategy

A systematic literature search in the databases of PubMed, Embase, Emcare, Web of Science, Cochrane Library, PsycINFO, and Academic Search Premier was conducted on March 12, 2020, and was updated on June 4, 2021. An additional search was performed on September 30, 2021, in the CINAHL database. These databases were chosen because of the scope of disciplines represented, in conjunction with the wide representation of international journals deemed relevant for this topic. The search involved the following key words: *interprofessional collaboration, interdisciplinary, long-term care, geriatric rehabilitation, elderly, facilitators, and barriers*, as well as their corresponding MeSH terms (Supplementary Material 1).

After removing duplicates, the selection included a 2-stage process.<sup>30</sup> First, 2 researchers (A.D., H.S.) independently screened records based on their title and abstract to determine whether the articles met the inclusion criteria as shown in Table 1. During the second stage, the

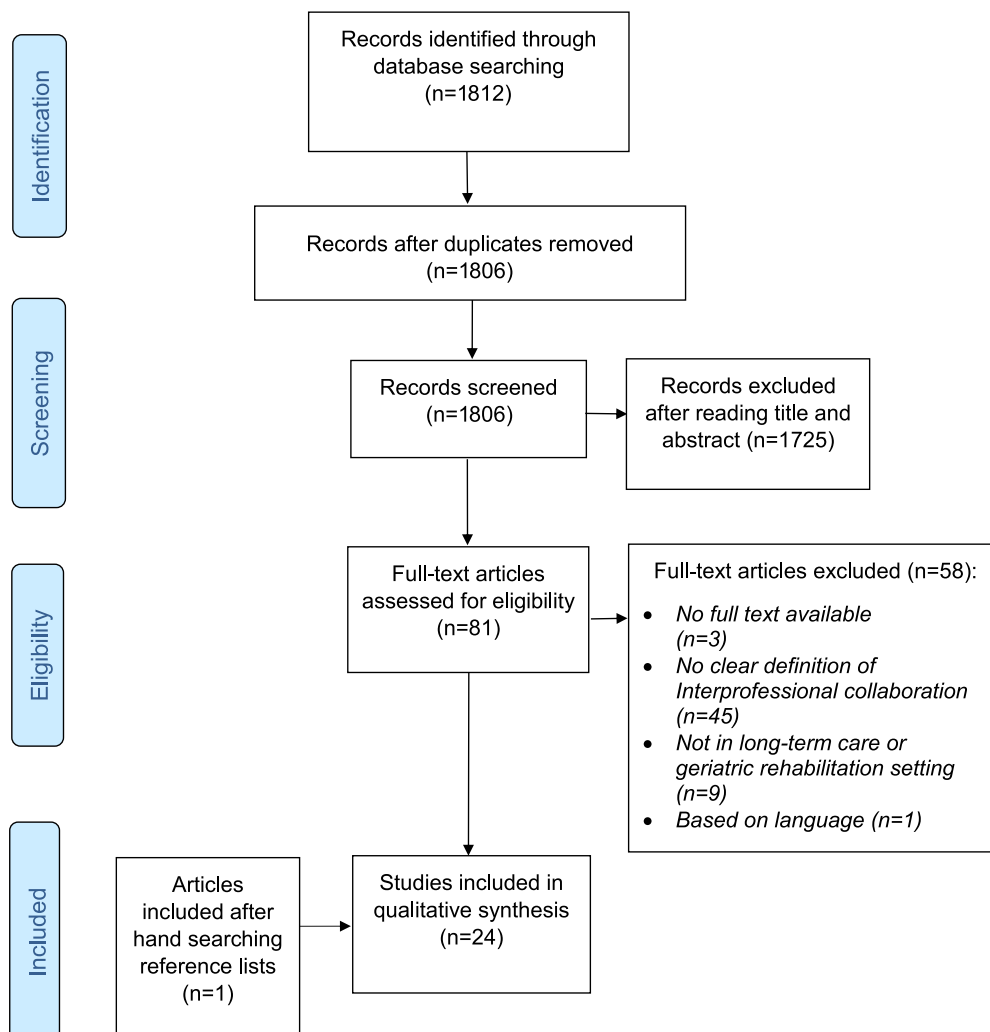


Fig. 1. Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram.

**Table 1**  
Inclusion and Exclusion Criteria

Types of Studies to Be Included	Types of Studies to Be Excluded
<ul style="list-style-type: none"> <li>• Human studies</li> <li>• Studies about interprofessional collaboration in institutional long-term care and inpatient geriatric rehabilitation for older adults aged <math>\geq 65</math> y</li> <li>• Studies using instruments to measure interprofessional collaboration in institutional long-term care and inpatient geriatric rehabilitation</li> <li>• Original research articles, irrespective of design, including quantitative and qualitative or mixed methods studies, case studies, cohort studies, and editorials by key opinion leaders, comparative studies, conference abstracts, theses</li> <li>• Studies using clear definitions of interprofessional, multidisciplinary, and interdisciplinary collaboration within the scope of the definition of the WHO<sup>19</sup></li> <li>• Languages: English, Dutch, Chinese, Japanese, Hebrew</li> <li>• Publication dates: no restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Animal studies</li> <li>• Studies about collaboration outside health care or institutional long-term care or inpatient geriatric rehabilitation</li> <li>• Studies with older adults with a specific chronic disease outside institutional long-term care or inpatient geriatric rehabilitation</li> <li>• Web pages, study protocols, articles without abstract</li> <li>• Studies using the terms <i>interprofessional</i>, <i>multidisciplinary</i>, and <i>interdisciplinary</i> collaboration without providing a definition of the concepts used and not falling within the scope of the definition used by the WHO<sup>19</sup></li> </ul>

remaining full-text articles were retrieved. Two researchers (A.D., H.S.) independently screened the full-text articles against the inclusion criteria. After each step, results were compared and discussed. In case of disagreement, a third researcher (W.A.) was consulted.

To identify instruments for assessing IPC, the same inclusion criteria were used. To maximize findings, the definition of IPC was left out. Five studies<sup>12,31–34</sup> were identified that described instruments for assessing IPC. The original references mentioned in the included studies were then checked for any additional descriptive information about the instruments.

Next, the methodologic quality of the included studies was independently assessed by 2 researchers (A.D., H.S.) independently using the Mixed Methods Appraisal Tool (MMAT).<sup>35</sup> Results were compared and discussed. In case of disagreement, a third researcher (W.A.) was consulted. The MMAT is designed to appraise the methodologic quality of qualitative studies, randomized controlled trials, non-randomized studies, quantitative descriptive studies, and mixed methods studies. The MMAT starts with 2 screening questions that address clarity of the research question and whether the data collected are sufficient to answer the research question. Additionally, there are 5 specific sets with 5 quality criteria for each type of research. Ratings vary between 0% (no quality criteria met) and 100% (all 5 quality criteria met).

### Data Analysis

A thematic analysis was performed.<sup>36</sup> It enables a systematically grounded synthesis to bring together findings from the different types of research being used in this study.<sup>37</sup> Codes were derived inductively and clustered in categories, which were then labeled to form the themes. Two researchers (A.D., H.S.) independently identified themes across the included studies followed by several sessions to reach consensus. A third researcher (W.A.) was consulted in case of any disagreement. Table 2 provides an overview of the codes, categories, and themes.

### Results

Of the 24 included studies, 3 studies were published between 1987 and 1999, 5 studies between 2000 and 2009, 12 studies between 2010 and 2019, and 4 studies in 2020–2021. Most articles were published in the United States ( $n = 9$ ), followed by Canada ( $n = 6$ ), the United Kingdom ( $n = 3$ ), Denmark ( $n = 2$ ), Australia ( $n = 1$ ), Germany ( $n = 1$ ), Belgium ( $n = 1$ ), and Lithuania ( $n = 1$ ). Almost all studies were conducted in institutional long-term care settings ( $n = 22$ ) with only 2 in inpatient geriatric rehabilitation. Included studies had qualitative

( $n = 10$ ), quantitative ( $n = 6$ ), and mixed method ( $n = 3$ ) designs or were editorials ( $n = 5$ ) (Table 3).

Based on the MMAT, the quality of the qualitative studies was high with an average score of 92%. The quality of the quantitative studies was moderate to low, with an average score of 44%, and the quality of the mixed method studies was low, with an average score of 33%. The main issue with the quantitative studies was incomplete outcome data. The main issues with the mixed method studies were insufficient integration of the qualitative and quantitative components in the interpretation of the results, and divergences and inconsistencies between the quantitative and qualitative results not being adequately addressed. The quality of the editorials could not be checked because of the absence of a quality assessment instrument for this type of article.

### Themes

Table 2 provides an overview of the codes, categories, and themes found. Three themes emerged regarding facilitators of and barriers to IPC: (1) Team performance, composed of the categories “collaboration between health care professionals, patients, and family caregivers,” “behavior and attitude of team members,” “shared goals,” and “clarity of roles”; (2) Organizational conditions, categorized into “workplace process,” “availability of resources,” and “leadership”; and (3) Sharing information, composed of “basic communication skills,” “communication process,” and “developing and utilizing knowledge.”

#### Team Performance

Solid relationships with good connections between team members enhances team performance, thereby enabling IPC.<sup>20,34,40,41,43–45,50</sup> Team performance further increases by having a shared vision and goals, and sharing responsibilities with patients and family caregivers.<sup>38,40,41,45–47,50–53</sup> IPC additionally benefits from an equal status among team members within a team along with understanding the contributions and recognizing the roles and expertise of each team member.<sup>20,21,31,32,39,40–42,44,45,47–49,51,53</sup> Individual team members can also enhance team performance by promoting, maintaining, engaging, sustaining, and trusting each other. Additionally, a positive attitude, being flexible, supportive, respectful, and valuing other team members increase IPC.<sup>20,21,31,34,38–40,42,47,49,52–54</sup>

Barriers to IPC related to team performance include boundaries within a team and tension among team members.<sup>20,32,45</sup> This is emphasized by negative behavior and attitude of team members, for example, by ignoring each other or assigning oneself a superior status.<sup>20,40,47,51,53,42</sup> Additional barriers are limited knowledge about roles, expertise, and expectations of other team

**Table 2**  
An Overview of the Codes, Categories, and Themes of the Included Studies

Themes	Categories	Codes	
		Facilitator	Barriers
Team performance	Collaboration among health care professionals, patients, and family caregivers	<ul style="list-style-type: none"> <li>• Team members perceiving themselves as having equivalent status to other team members<sup>21,39,47</sup></li> <li>• Understanding the contributions of team members<sup>20,31,40–42,45,47–49,51,53</sup></li> <li>• Eagerness for cooperation<sup>52</sup></li> <li>• Team members being flexible and supportive<sup>20,39,47,52,53</sup></li> <li>• A personality that enables to take on various new roles<sup>42</sup></li> <li>• Developing a team mentality<sup>47</sup></li> <li>• Establishing norms for individual behaviors and the group as a whole<sup>41</sup></li> <li>• Solid relationships building on a history of working together and communication between team members<sup>20,34,40,41,43,44,50</sup></li> <li>• Team bonding through frequent social exchange<sup>20,40,45</sup></li> <li>• Maintaining a dynamic balance between attachment to a professional reference group and attachment to the team<sup>41</sup></li> <li>• Members promoting, maintaining, engaging, and sustaining the team<sup>21,31,39,40,47,53</sup></li> <li>• Engaging the whole team to encourage a culture shift toward a more engaged team dynamic<sup>44,46</sup></li> <li>• Creating and maintaining positive working relationships<sup>38,44</sup></li> <li>• Team members feeling acknowledged for contributions<sup>31</sup></li> <li>• Achieving consensus in case of disagreements<sup>40</sup></li> <li>• Collaboratively solving problems<sup>21</sup></li> <li>• Making recommendations concerning patient care with the whole team<sup>40,52</sup></li> <li>• Using interventions designed to improve communication and cooperation between staff and families<sup>22</sup></li> <li>• Avoiding conflicts and misunderstandings by exposing team members to each other's cultures<sup>42</sup></li> <li>• Organizing an ethnically diverse team<sup>43</sup></li> <li>• Creating ethnic concordance between the patient and the professional team members<sup>43</sup></li> <li>• Involving families<sup>22,46</sup></li> <li>• Early and consistent involvement of patients<sup>41,45</sup></li> <li>• Holding team members accountable for their actions<sup>40,53</sup></li> <li>• Use teamwork approach to address the task at hand<sup>40,53</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Not knowing team members because of a high turnover of practitioners<sup>40</sup></li> <li>• Working with many part-time and temporary staff<sup>44</sup></li> <li>• Conflicts within a team<sup>42</sup></li> <li>• Not reaching consensus about how to confront a problem<sup>40</sup></li> <li>• Tension among groups of staff or team members<sup>20,32</sup></li> <li>• Intergroup boundaries<sup>20,45</sup></li> <li>• Pressure by team members to change clinical judgments based on nonclinical factors<sup>47</sup></li> <li>• Team members having difficulty with transition toward a more engaging and interactive team dynamic<sup>44</sup></li> <li>• Health Care Assistants positioning themselves outside the wider team<sup>20</sup></li> <li>• Presence of professional autonomy<sup>38,42</sup></li> <li>• Absence of responsibility for making the groups work as a team<sup>45</sup></li> <li>• Mismatch between expectations and reality of tasks by team members, patients, and family caregivers<sup>34,41,50</sup></li> <li>• Lack of awareness of teamwork<sup>40</sup></li> <li>• Cultural barriers between professionals<sup>42</sup></li> </ul>
		Behavior and attitude of team members	<ul style="list-style-type: none"> <li>• Pitching in and expanding the capacity for working together<sup>54</sup></li> <li>• Seeking assistance, being approachable, and reciprocating to promote connections between staff<sup>54</sup></li> <li>• Showing appreciation by expressing a positive opinion of other people's actions<sup>34,54</sup></li> <li>• Giving respect and valuing others in a team<sup>34,40,42,47,49,52,54</sup></li> <li>• Paying attention, by making a conscious effort to stop, watch, and act<sup>54</sup></li> <li>• Sharing and celebrating small successes within the team<sup>40</sup></li> <li>• Willingness to listen to each other<sup>40,53</sup></li> <li>• Supporting and being sensitive to one another's needs to protect others from varying physical aspects of care and unpleasant and disturbing sides of the job<sup>20,40,42,49,50</sup></li> <li>• Having a positive attitude and perception toward work and other team members<sup>20,42</sup></li> <li>• Building trust and relying on each other<sup>20,38,40,46,49,53</sup></li> <li>• Team members feeling comfortable by team members to propose ideas in a team<sup>40</sup></li> <li>• Members support flexibility and adaptability to change<sup>47</sup></li> <li>• Tolerance among team members<sup>47</sup></li> <li>• Team members have sense of belonging on a unit<sup>48,53</sup></li> <li>• Team members are having the ability of providing one another with amusement<sup>20</sup></li> <li>• Enthusiasm of staff<sup>45</sup></li> <li>• Emotional support for family caregivers when making difficult decisions<sup>46</sup></li> </ul>

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Table 2 (continued)

Themes	Categories	Codes	
		Facilitator	Barriers
	Shared goals	<ul style="list-style-type: none"> <li>• Making joint interdisciplinary decisions<sup>21</sup></li> <li>• Having a shared vision<sup>45,50,53</sup></li> <li>• Understanding the team's goal<sup>40,51</sup></li> <li>• Making the prioritization of goals evident by using a goal matrix (long term vs short term, and task goal vs maintenance goal)<sup>41,47</sup></li> <li>• Setting priorities with the team to pursue the shared goals<sup>34,40,45,49</sup></li> <li>• Sharing accountability by relying on the team to validate findings<sup>31</sup></li> <li>• Moving the team from best possible outcome to specific goals<sup>47</sup></li> <li>• Stimulating patient's input when establishing treatment goals<sup>46,47</sup></li> <li>• Differentiating whether goals benefit the patient or the team<sup>47</sup></li> <li>• Making the patient and family responsible for the care plan with shared goals and a shared approach<sup>38,41,50</sup></li> <li>• Using objective measures to enhance the process of goal-setting<sup>41</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Reported problems do not reflect the goals identified in the interdisciplinary treatment plan<sup>21</sup></li> <li>• Involving patients who are not mentally competent in the goal-setting process<sup>47</sup></li> <li>• Embracing own personal and professional goals to the exclusion of others<sup>47</sup></li> <li>• Unclear definition of shared goals<sup>47</sup></li> <li>• Absence of a shared vision<sup>45,53</sup></li> <li>• Unclear capabilities and responsibilities in relation to specific goals<sup>38,41</sup></li> </ul>
	Clarity of roles	<ul style="list-style-type: none"> <li>• Recognizing roles and skills within a team<sup>20,32,39,41,42,44,45,47,51</sup></li> <li>• Clarity about roles in family-staff partnership<sup>53,55</sup></li> <li>• Using common language to clarify professional roles<sup>44</sup></li> <li>• Teambuilding exercises to allow for better understanding of other providers roles<sup>32</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Conflicting or misaligned expectations regarding professional roles<sup>22,44</sup></li> <li>• Team members are not recognized and underrepresented within the team<sup>45,48</sup></li> <li>• Limited knowledge regarding the roles and expertise of other disciplines<sup>22,41,45,47</sup></li> <li>• Not knowing the impact of one's involvement within a team<sup>40</sup></li> <li>• Unclear who is responsible for bringing disciplines and information together<sup>45</sup></li> <li>• Role conflict between staff and family<sup>55</sup></li> <li>• Ignoring what is happening in the current environment as a result of relying strongly on rules and policies<sup>54</sup></li> <li>• Prioritizing institutional goals over more patient-centered discussions<sup>21</sup></li> <li>• Interprofessional collaboration not equally supported by professed and actual values of the institution<sup>41,47</sup></li> <li>• Absence of organizational leadership for implementation of practice development<sup>44</sup></li> <li>• Structurally nested organizational hierarchies<sup>20,51</sup></li> <li>• Inadequate organization of out-of-hours services<sup>39</sup></li> <li>• Relocating team members and patients<sup>55</sup></li> <li>• Disruption of team composition<sup>47</sup></li> <li>• Evaluating processes with monodisciplinary personnel<sup>47</sup></li> <li>• Regulatory constraints such as limited reimbursement for services for particular team members<sup>41</sup></li> <li>• Implementing a collaborative framework without considering the strong identity of some disciplines<sup>20</sup></li> <li>• Scheduling conflicts leading to limited ability to attend meetings<sup>40,48</sup></li> <li>• General practitioners (GPs) fail to keep promises about visits<sup>45</sup></li> <li>• Absence of coordination of care to create integrated care plans<sup>45</sup></li> <li>• Working with a large number of GPs from different practices<sup>39</sup></li> <li>• Duplication of services<sup>41</sup></li> <li>• Different work practices across units making it difficult to take on tasks in other units<sup>50</sup></li> <li>• A sense of ownership in the own unit<sup>50</sup></li> <li>• A sense of insecurity and unfamiliarity with other units<sup>50</sup></li> <li>• Long distances between physical locations making it difficult to relieve each other within and between care units<sup>32,50</sup></li> </ul>
Organizational conditions	Workplace process	<ul style="list-style-type: none"> <li>• Involving team members when making changes in processes and procedures<sup>40,52</sup></li> <li>• Involving 1 or more team members who make it easier or possible to achieve the objectives of teamwork<sup>54</sup></li> <li>• Authorizing staff and promoting the adoption of proactive models to work with other practitioners<sup>39</sup></li> <li>• Establishing a shared mental model, which allows individuals to coordinate their efforts to complete interdependent tasks more consistently<sup>44</sup></li> <li>• Working with a comprehensive and planned approach<sup>21,41</sup></li> <li>• An institutional philosophy that endorses interdisciplinary coordination<sup>21,41,43,45,47,49,52</sup></li> <li>• Attending to formal and social processes to minimize conflict<sup>45</sup></li> <li>• Influencing procedural boundaries (who and what enters the team, and how)<sup>47</sup></li> <li>• Formal team-based care<sup>44,45</sup></li> <li>• Joint evaluation of projects to strengthen organizational ties<sup>52</sup></li> <li>• Ongoing reflection for continuous improvement of the full team, through formal mechanisms like quality audits, as well as regularly scheduled team meetings<sup>45,49</sup></li> <li>• Appointing observers within a group to evaluate and report dynamics of the groups relevant for discussion<sup>41</sup></li> <li>• Staff working both day and evening shifts to create better understanding and knowledge exchange across shifts<sup>50</sup></li> <li>• Policies that reflect a strong family orientation<sup>22</sup></li> <li>• Rotating responsibility for chairing meetings to provide the experience for all members<sup>41</sup></li> <li>• Structure working with GPs by contracting them, working with a small number of them and having them visit frequently<sup>39</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Implementing a collaborative framework without considering the strong identity of some disciplines<sup>20</sup></li> <li>• Scheduling conflicts leading to limited ability to attend meetings<sup>40,48</sup></li> <li>• General practitioners (GPs) fail to keep promises about visits<sup>45</sup></li> <li>• Absence of coordination of care to create integrated care plans<sup>45</sup></li> <li>• Working with a large number of GPs from different practices<sup>39</sup></li> <li>• Duplication of services<sup>41</sup></li> <li>• Different work practices across units making it difficult to take on tasks in other units<sup>50</sup></li> <li>• A sense of ownership in the own unit<sup>50</sup></li> <li>• A sense of insecurity and unfamiliarity with other units<sup>50</sup></li> <li>• Long distances between physical locations making it difficult to relieve each other within and between care units<sup>32,50</sup></li> </ul>
	Availability of resources	<ul style="list-style-type: none"> <li>• Working together to apply, revise, and develop IPC processes through access to necessary resources (eg, materials, time, budget, and space)<sup>31,34,38,40,43,47,48,52,53</sup></li> <li>• Organizational capacity for successful influencing of implementation<sup>44,50</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Resource-constrained environment<sup>53,55</sup></li> <li>• Limited opportunity for appropriate team consultation moments and poor availability of space for all disciplines<sup>43,45,47</sup></li> <li>• Fragmented, profession-specific, or inaccessible support<sup>44</sup></li> </ul>

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Table 2 (continued)

Themes	Categories	Codes	
		Facilitator	Barriers
	Leadership	<ul style="list-style-type: none"> <li>Organizational security for adequate staffing to function (sustainably) as a team<sup>47</sup></li> <li>Willingness of administration to support a team with necessary resources<sup>52</sup></li> <li>Dedicating human resources to support collaboration<sup>45</sup></li> <li>Continuous management attention to and investment in interpersonal and team skills training<sup>43</sup></li> <li>Spending time and effort to make the team work and to maintain this<sup>40</sup></li> <li>Institutional support to improve interaction with other professions<sup>42,45</sup></li> <li>Supportive leadership encouraging and involving all members on a team to participate<sup>31,40,43,46,48,53</sup></li> <li>Shared leadership during meetings<sup>31</sup></li> <li>Dual leadership by dividing leadership into 2 areas: task related vs team related<sup>47</sup></li> <li>Strong leadership based on organizational mandates<sup>40,43–45</sup></li> <li>Balance between responsibility (achievement expectation) and authority (organizational freedom and influence)<sup>38,47</sup></li> <li>Leader facilitating regular communication between all members of the care team<sup>40,43–45</sup></li> <li>Leaders representing all parties involved<sup>52</sup></li> <li>Providing guidance through supervision and feedback<sup>50,53</sup></li> <li>Decisive managers providing direct problem solving and coordination<sup>41,43,50,53</sup></li> <li>Providing a managerial framework for the day-to-day work tasks<sup>50</sup></li> <li>Identifying a team coordinator to address disagreements over leadership<sup>41</sup></li> <li>Openly recognizing and discussing the tensions between traditional and interprofessional discourses of collaborative leadership<sup>45</sup></li> <li>Providing leaders with training on team management and quality improvement<sup>44</sup></li> </ul>	<ul style="list-style-type: none"> <li>Limited reimbursement for services for particular team members<sup>41</sup></li> <li>Staff shortages<sup>47</sup></li> <li>Time constraints regarding the care<sup>21,22,32,40,45,47</sup></li> <li>Assuming that leadership is monolithic and unitary<sup>47</sup></li> <li>Believing that leadership is a trait, a genetic quality, fate, or professional discipline<sup>47</sup></li> <li>Missing the necessary conflict resolution skills<sup>50</sup></li> <li>Failing to bring together team members<sup>40</sup></li> <li>Minimal leadership and support from management<sup>34,38,55</sup></li> <li>Absence of leadership at administrative level<sup>40</sup></li> <li>Disagreement over leadership and the distribution of authority<sup>41</sup></li> <li>Absence of training in skills necessary for successful team leadership<sup>41</sup></li> </ul>
Sharing information	Basic communication skills	<ul style="list-style-type: none"> <li>Talking with other people to make sense of confusing information or situations<sup>54</sup></li> <li>Clarifying the meaning of exchanged information<sup>54</sup></li> <li>Verifying that shared information is understood by others<sup>54</sup></li> <li>Actively engage in direct communication with others<sup>31</sup></li> <li>Active dialogue to exchange information<sup>44,53</sup></li> <li>Listening to promote new information exchange<sup>32,54</sup></li> <li>Asking questions to explain when feeling uneasy about something and when feeling not heard<sup>54</sup></li> <li>Exchanging (timely) feedback<sup>38,41,52,54</sup></li> <li>Suggesting alternatives giving different options for others to consider before taking action<sup>54</sup></li> <li>Effective communication<sup>22,31,32,39,42,43,45,46,48,49,50,52</sup></li> <li>Using a common language to effectively convey the same message to an entire team<sup>44</sup></li> <li>Defining unique disciplinary terms used by different team members, to improve communication<sup>52</sup></li> <li>Speaking with one voice within a team<sup>40</sup></li> <li>Realizing that most communication is nonverbal<sup>47</sup></li> <li>Caregivers feeling comfortable talking directly with managers<sup>46</sup></li> </ul>	<ul style="list-style-type: none"> <li>Avoiding interaction, ignoring others<sup>54</sup></li> <li>Reprimanding staff instead of turning a negative situation into a learning experience<sup>54</sup></li> <li>Use of (professional) terminology by different team members<sup>42,44,54</sup></li> <li>No shared dialogue about mutual expectations, cooperation, and project support<sup>38</sup></li> <li>Lack of information from management<sup>38</sup></li> </ul>
	Communication process	<ul style="list-style-type: none"> <li>Interactions facilitate strong connections, information exchange, and diversity in cognitive schema<sup>54</sup></li> <li>Enhancing team functioning and address critical issues through meetings and bedside sessions (with patients)<sup>21,31,34,39–41,45–48,51</sup></li> <li>Multidimensional assessment to facilitate communication among team members<sup>31,41,46</sup></li> <li>Constructing communication processes in caring for patients with complex needs<sup>31</sup></li> <li>Using (semi)structured action plans during meetings to elicit engagement</li> <li>Following up issues discussed and reaching consensus in team meetings<sup>40</sup></li> </ul>	<ul style="list-style-type: none"> <li>Absence of communication between team members<sup>20,40,41,44,46,52,54</sup></li> <li>Absence of internal communication within nursing homes<sup>45</sup></li> <li>Feeling that meetings are a waste of time<sup>21</sup></li> <li>Little formal or informal communication between team members of different hierarchical levels<sup>20,34,46</sup></li> <li>Absence of communication between day and evening shifts or disciplines<sup>40,50</sup></li> <li>Communicating through others<sup>54</sup></li> <li>Differences in perception about information obtained from assessments among team members, patient, and family<sup>41,46,55</sup></li> </ul>

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Table 2 (continued)

Themes	Categories	Codes	
		Facilitator	Barriers
	Developing and utilizing knowledge	<ul style="list-style-type: none"> <li>• Designating a team manager for communication to apprise team members of progress and changes in care plans<sup>41</sup></li> <li>• Reviewing action plans during meetings<sup>48</sup></li> <li>• Meeting face-to-face during shift overlaps<sup>40,50</sup></li> <li>• Completing written treatment plans in order to communicate with the rest of the team<sup>21</sup></li> <li>• Positive interactions with another profession to improve negative or dismissive behavior<sup>42</sup></li> <li>• Using (new) technologies for communication<sup>52</sup></li> <li>• Implementation of protocols and processes by staff and practitioners together<sup>40,46</sup></li> <li>• Training team members didactically and experientially to communicate constructively, unambiguously, and consciously<sup>47–48</sup></li> <li>• Active exchange information and knowledge between team members<sup>20,31,32,39,44–46,48,54</sup></li> <li>• Learning from other team members<sup>21,40,44,47,49</sup></li> <li>• Using champion teams to enhance training<sup>51</sup></li> <li>• Using action-oriented learning to increase knowledge<sup>31,38</sup></li> <li>• Using interactive, innovative activities, discussions, case studies, readings, and games for education to promote the application of teamwork skills<sup>32</sup></li> <li>• Providing team members with opportunities to improve their skills<sup>43,53</sup></li> <li>• Using interprofessional shared learning<sup>31,42,44,51</sup></li> <li>• Enhancing knowledge to increase confidence within a team<sup>31,39,40,51</sup></li> <li>• Providing information and education for patients and family caregivers<sup>22,44,55</sup></li> <li>• Family caregivers having knowledge of dementia care<sup>55</sup></li> <li>• Awareness that strong IP communication and documentation are the pillars of good care<sup>31</sup></li> <li>• Suitably qualified staff with the skills to assess patient needs<sup>55</sup></li> <li>• Use clinical issues to simulated teamwork<sup>40</sup></li> <li>• Teaching to help others develop their ability to care for patients<sup>54</sup></li> <li>• Knowledge of team members about the meaning, value, and implication of clinical data for integrated evaluation<sup>47</sup></li> <li>• Utilizing firsthand observations from patient assessment of all team members<sup>52</sup></li> <li>• Knowing and understanding the definition of IPC<sup>41</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate sharing of detailed information about patients<sup>22,38,53</sup></li> <li>• Absence of support and preparation for family caregivers and care recipient prior to admission<sup>55</sup></li> <li>• Infrequent formal meetings<sup>46</sup></li> <li>• Formal meetings without a client-specific agenda<sup>46</sup></li> <li>• Reluctance to share skills with other team members<sup>39</sup></li> <li>• Absence of trust due to limited training by unregulated health care workers<sup>51</sup></li> <li>• Rarely teaching team skills<sup>43</sup></li> <li>• Team members do not recognize present knowledge in their team<sup>20</sup></li> <li>• Fragmented external (profession or role-specific) educational support<sup>44</sup></li> <li>• Absence of incentives to develop IPC among clinicians and educators<sup>42</sup></li> <li>• Few opportunities to meet and share knowledge about patients with team members<sup>20,42</sup></li> <li>• Relatives tend to withhold suggestions for improving care for fear of negative consequences for the patient<sup>22</sup></li> <li>• Absence of knowledge on patients and their condition<sup>20,32,39,44,48</sup></li> <li>• Clinical isolation due to a narrow perspective on health and illness<sup>38,42</sup></li> <li>• Lack of support in knowledge sharing<sup>38</sup></li> </ul>

members.<sup>22,40,41,44,45,47</sup> This results in a team where members are not recognized and are underrepresented.<sup>45,48</sup>

#### Organizational Conditions

Facilitators of IPC related to organizational conditions are having established values and supporting interdisciplinary coordination, processes, and procedures.<sup>21,41,43,44,45,47,49,52</sup> Organizational conditions further improve by having a supportive and decisive leader with access to the necessary resources.<sup>34,38,40,43–46,53</sup> Additional facilitators related to organizational conditions are having involved formal teams with constructive interactions between all team members and working with a comprehensive and planned approach.<sup>21,31,40–48,50,52,53</sup>

Organizational barriers to IPC increase by clinging to known concrete values and by maintaining structurally established hierarchies.<sup>20,41,47,51</sup> Time constraints to plan the care and failing to bring team members together, for example, because of poor availability of team members or physical distances between locations, further obstruct IPC.<sup>21,22,32,40,43,45,47,48,50</sup>

#### Sharing Information

Effective communication will enhance sharing information and is a pronounced facilitator of IPC.<sup>22,31,32,39,42,43,45,46,48,49,50,52</sup> To achieve efficient communication, the use of common language, multidimensional patient assessments, the use of action plans, addressing critical issues during meetings, exchanging feedback, and setting priorities are essential.<sup>21,31,34,38–41,44–48,50–52,54</sup> This communication improves by interprofessional shared learning and training team members, patients, and family caregivers didactically and experientially to exchange information and knowledge. This enables constructive, unambiguous, and conscious communication, which in turn facilitates IPC.<sup>20–22,31,32,38–40,42,44–48,51,53–55</sup>

No or poor communication within a team or between different shifts are noted to be sizeable barriers to IPC.<sup>20,40,41,44,46,50,52,54</sup> This can be exacerbated by the use of (professional) terminology or different team members having different perceptions about patient assessments.<sup>41,42,44,46,54,55</sup> Insufficient opportunities to meet and share knowledge within a team obstructs IPC, resulting in a lack of

**Table 3**  
Summary of Characteristics of Included Studies

Author, Year, Country	Design	Method	Participants and Setting	Aim of Study	Main Findings	MMAT
Aagaard et al, 2020, Denmark <sup>38</sup>	Qualitative, embedded, multiple-case study	Interviews, observations	41 multidisciplinary health care providers 3 nursing homes LTC	Evaluate implementation process of an oral care intervention in nursing homes in a Danish municipality.	Situated learning facilitates trust and knowledge translation between patients and health care professionals and supports nursing staff in developing competencies in performing sufficient oral care.	100%
Anderson et al, 2014, United States <sup>54</sup>	Qualitative, comparative, multiple-case study	Observations, interviews, and document reviews	406 multidisciplinary health care providers 48 nursing homes LTC	Describe relationship patterns and management practices in nursing homes that facilitate or hinder better outcomes for patients and staff.	Besides a standard type, a second type of management practice is identified, referred to as Local Interaction Strategies. Using these Local Interaction Strategies can improve the outcomes for the nursing home population.	100%
Badger et al, 2012, United Kingdom <sup>39</sup>	Mixed method	Survey and case study	75 multidisciplinary health care providers 49 nursing homes LTC	Evaluate the impact of a training program to improve end-of-life care in nursing homes on collaboration between nursing home staff and other health practitioners.	Using the Gold Standards Framework in Care Homes program can improve communication and collaboration between nursing home staff and other health practitioners.	80%
Bokhour, 2006, United States <sup>21</sup>	Qualitative	Observation, interviews, and sociolinguistic discourse analysis	16 multidisciplinary health care providers 2 teams LTC	Examine professional communication practices in interdisciplinary team meetings.	Collaborative discussions during team meetings were indicated to coordinate care and make shared decisions about patient care.	100%
Boscart et al, 2017, Canada <sup>31</sup>	Qualitative	Observations, semistructured interviews using a social constructivist interpretive framework	30 multidisciplinary health care providers 2 nursing home units LTC	Examine the preliminary impact on staff of the implementation of an interprofessional communication and collaboration intervention to improve knowledge on heart failure.	Increased communication and knowledge on heart failure through a committed interprofessional collaboration was shown as a result of establishing core teams.	100%
Bramble et al, 2011, Australia <sup>55</sup>	Quantitative, multiple arms pre- and postintervention	Quasiexperimental with randomized allocation of sites but not participants	59 multidisciplinary health care providers 57 families LTC	Explore the effect on knowledge of dementia, and family and staff well-being of family involvement in a care intervention.	The major barrier to the success of family involvement in achieving beneficial psychosocial effects for family and staff was a lack of resources and leadership.	80%
Chafetz et al, 1987, United States <sup>47</sup>	Editorial	n/a	n/a LTC	Outline common problems in interdisciplinary teams and present suggestions for overcoming these common problems.	Organizational support, leadership, team goals, communication, and the interactions between team members are important in interdisciplinary teams.	n/a
Clay et al, 2003, United Kingdom <sup>49</sup>	Editorial	n/a	n/a GR	Examine key factors relating to the rehabilitation of older people	To meet the needs of all older people in health care settings, an interdisciplinary, goal planning approach to rehabilitation is necessary. Nurses play a crucial role in this.	n/a

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Table 3 (continued)

Author, Year, Country	Design	Method	Participants and Setting	Aim of Study	Main Findings	MMAT
Cranley et al, 2020, Canada <sup>46</sup>	Qualitative	Interviews	3 staff 3 patients 3 family caregivers 1 nursing home LTC	Explore shared decision-making among residents, their families, and staff to determine relevant strategies to support shared decision making.	Shared decision making can be facilitated by a relational approach to care and will develop further through effective communication and collaboration.	100%
Desveaux et al, 2019, Canada <sup>44</sup>	Qualitative	Interviews	29 interviews 13 nursing homes LTC	Evaluate an intervention designed to improve fall management and quality of care in nursing homes. Explore whether, how, and why the intervention can improve evidence uptake and identify perceived changes to inform outcomes appropriate for quantitative evaluation.	There is a knowledge-to-practice gap with respect to fall management. Involving a complete team in personalized team interventions can reduce conflicting expectations about expert roles, a disconnection in assumed and received information, and challenges created by a large number of temporary and part-time team members. To improve evidence uptake, strong team functioning with effective communication and clarity about roles is needed.	100%
Foli et al, 1992, United States <sup>52</sup>	Quantitative	Survey	4 teams 120 nursing homes and dental services LTC	Describe the collaborative process between nursing homes and dental services in the assessment and evaluation of oral hygiene.	Interdisciplinary collaboration is enhanced through suitable disciplinary representation, leadership, clear language, immediate assessment, and well-timed feedback	0%
Huijbregts et al, 2012, Canada <sup>48</sup>	Mixed methods	Participatory action approach with interviews, focus groups, and surveys	90 multidisciplinary health care providers 29 patients 13 family members LTC	Implement a mental health guideline in an LTC residence in order to improve interprofessional care (enhance interprofessional collaboration, improve staff satisfaction, and team processes) for clients with mood and behavioral issues.	Implementation of a metal health guideline can improve interprofessional care (enhance interprofessional collaboration, improve staff satisfaction and team processes). Implementation can be established by using implementation and educational interventions, and all members attending team meetings.	20%
Jakobsen et al, 2018, Denmark <sup>50</sup>	Qualitative	Focus group	33 multidisciplinary health care providers 6 nursing homes LTC	Identify barriers to and facilitators of collaboration among older adult care workers, and describe the processes leading to effective collaboration.	Managers are important to ensure effective collaboration by outlining collaboration between team members and providing policies and processes. Managers also need to be attentive, take action when needed, and deal with conflicts.	100%
Kaasalainen et al, 2017, Canada <sup>51</sup>	Quantitative, a cross-sectional design	Survey	317 surveys 4 nursing homes LTC	Compare the differences across occupational groups related to their end-of-life care –specific educational needs and reported intensity of interprofessional collaboration.	Delivering optimal palliative care requires appropriate education and incorporation of all occupational groups on the interdisciplinary team.	60%

Kaldy et al, 2007, United States <sup>40</sup>	Editorial	n/a	n/a LTC	Describe best practices of teamwork.	Interdisciplinary teamwork is demanding work, organizing team members, building relationships to address specific tasks, and work thoroughly.	n/a
Lloyd et al, 2011, United Kingdom <sup>20</sup>	Qualitative	Ethnographic using observations and interviews	30 individual interviews 3 focus groups 3 nursing home units LTC	Reveal identity dynamics at the frontlines of care, with reference to social identity theory and discuss implications for delivering multi professional and interprofessional care.	Low group identity combined with strong monodisciplinary behavior result in barriers to effective teamwork.	80%
MacEntee et al, 2011, Canada <sup>42</sup>	Editorial	n/a	n/a LTC	Addresses oral health and frailty in older patients. Addresses interprofessional health care teams and their knowledge and skills on oral health. Addresses the representation of dental professionals on health care teams.	Barriers for dental professionals to contribute to an interprofessional team are limited experience on health care team and ignorance of other team members about significance of oral health.	n/a
Mager et al, 2014, United States <sup>32</sup>	Mixed methods	Focus groups, surveys, and pre- and postinterventions	97 multidisciplinary health care providers 5 nursing homes or home care agencies LTC	Improve communication and teamwork among interprofessional health care providers by using innovative teambuilding activities.	Barriers in communication and teamwork skills can be overcome by a multidisciplinary team using the interprofessional small group methodology.	0%
Poškutė et al, 2021, Lithuania <sup>53</sup>	Qualitative	Focus groups	54 policy makers, service organizers, and administrators LTC	Examine to what extent and in what ways stakeholders collaborate in the planning, organizing, and delivery of LTC to older persons in Lithuania. Examine the key facilitators and constraints of this collaboration.	Facilitators of and barriers to collaboration were found on a national, organizational, and individual level. Examples of constraints on collaboration are shortage of human resources, increased workload, and bureaucratic requirements. A lack of financial resources was not perceived as a major barrier.	100%
Reese et al, 2021 <sup>34</sup>	Quantitative	Surveys	345 nurses 63 physicians LTC	Assess interprofessional collaboration between nurses and physicians in LTC facilities and determine if there are differences between subgroups of nurses.	Nurses evaluated interprofessional collaboration more critically than physicians. Between subgroups of nurses, the general trained nurses as well as the ones in higher management positions evaluated interprofessional collaboration more critically than geriatric nurses.	20%
Robison et al, 2007, United States <sup>22</sup>	Quantitative	Randomized controlled trail	388 family members 384 multidisciplinary health care providers 20 nursing homes LTC	Improve communication and cooperation between staff and families of patients in the Partners in Caregiving in a Special Care Environment program.	The Partners in Caregiving in a Special Care Environment program enhanced family communication with staff, participation in care, and decreased disagreements between family and staff.	60%

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Table 3 (continued)

Author, Year, Country	Design	Method	Participants and Setting	Aim of Study	Main Findings	MMAT
Saltz et al, 1992, United States <sup>41</sup>	Editorial	n/a	n/a GR	Present relevant team dynamics and describe key elements and activities associated with GR team practice.	The combined energy and expertise of individual health care professionals is essential for organization of GR teams.	n/a
Temkin et al, 2004, United States <sup>43</sup>	Quantitative	Surveys	1860 multidisciplinary health care providers 1220 surveys 26 nursing homes LTC	Test reliability and validity of a survey instrument for assessing interdisciplinary team performance in LTC settings and measure the perceived interdisciplinary team performance in the Program of All-Inclusive Care for the Elderly.	The survey instrument showed good reliability and validity. Team organization and team efficiency are positively associated in the Program of All-Inclusive Care for the Elderly. A decrease in team effectiveness is shown with a longer duration of the program.	80%
Tsakitzidis et al, 2017, Belgium <sup>45</sup>	Qualitative, descriptive methodology	Focus groups and semistructured interviews	23 multidisciplinary health care providers LTC	Gain understanding of the perception of professionals toward interprofessional collaboration in nursing homes and the factors that have an impact on interprofessional collaboration.	Interprofessional collaboration is situational and inadequately organized. Often, a shared vision or responsibility sharing is absent. Roles are not well defined.	100%

n/a, not applicable; MMAT, Mixed Methods Appraisal Tool.

**Table 4**  
Overview of the Instruments Used to Measure Interprofessional Collaboration in the Included Studies

Author, Year, Country	Instruments Used to Measure IPC	Aspects of IPC Measured
Halabisky et al, 2010, Canada <sup>12</sup>	Collaborative Practice Survey <sup>57</sup>	<ul style="list-style-type: none"> <li>• Experienced collaborative practice</li> <li>• Satisfaction with collaborative experience</li> </ul>
Heckman et al, 2018, Canada <sup>33</sup>	Interprofessional Socialization and Valuing Scale <sup>58</sup>	<ul style="list-style-type: none"> <li>• Ability to work with others</li> <li>• Value in working with others</li> <li>• Comfort in working with others</li> </ul>
Kaasalainen et al, 2017, Canada <sup>51</sup>	The Intensity of Inter-Professional Collaboration Questionnaire <sup>59</sup>	<ul style="list-style-type: none"> <li>• Care sharing activities</li> <li>• Interprofessional co-ordination between various groups of professionals</li> </ul>
Mager et al, 2014, United States <sup>32</sup>	The GITT Demographic questionnaire <sup>*,60,61</sup>	Information about trainees that is expected to influence knowledge and attitudes about geriatric teams and team training (gender, age, ethnic background, discipline, part-time or full-time student status, current employment, year in training, and amount of prior experience working in teams or working with geriatric patients)
Reese et al, 2021, Germany <sup>34</sup>	The GITT Team Skill Scale <sup>*,60,61</sup>	Self-perceptions regarding team skills
	The GITT Case Study Test of Interdisciplinary Geriatric Care Planning <sup>*,60,61</sup>	Knowledge of interdisciplinary geriatric care planning
	The Team scale <sup>62</sup>	Internal participation from the perspectives of both patients and staff
	Work Situation Questionnaire for nurses/physicians <sup>63</sup>	<ul style="list-style-type: none"> <li>• Hierarchy between manager and physician or nurse</li> <li>• Conflict resolution ability of the team</li> <li>• Work conditions at the ward</li> <li>• Cooperation of physicians and nurses</li> </ul>

GITT, Geriatric Interdisciplinary Team Training.

\*Reference used in the included study was invalid. A search on the website of the John A. Hartford Foundation and PubMed resulted in 2 studies describing the GITT. Only the parts that were used in the Mager et al<sup>32</sup> study were included in the table.

knowledge about the patients and their condition.<sup>20,32,39,42,44,48</sup> A schematic overview of the facilitators and barriers is included in [Supplementary Figure 1](#).

#### Measuring Instruments for IPC

Five studies<sup>12,31–34</sup> were identified that described 8 instruments used to assess IPC in an LTC setting (see [Table 4](#)). None of the instruments was used in more than 1 of the included studies. The studies did not provide comprehensive descriptions of the instruments, reported insufficient psychometric qualities, or the instruments were not validated for use in the LTC or GR setting. The main aspects of IPC measured in these studies were experienced collaboration and communication.

#### Discussion

This systematic review examined facilitators of and barriers to IPC in LTC and GR. The facilitators and barriers were categorized into 3 themes: (1) Team performance (collaboration between health care professionals, patients, and family caregivers; behavior and attitude of team members; shared goals; clarity of roles), (2) Organizational conditions (workplace process, availability of resources, leadership), and (3) Sharing information (basic communication skills, communication process, developing and utilizing knowledge). Many of the identified facilitators of and barriers to IPC were related to team performance and sharing information.

Although fewer facilitators and barriers were related to organizational conditions, these conditions enhance effective IPC, which can optimize comprehensive care for older patients with multimorbidity in LTC and GR settings. IPC is enhanced by connecting and stimulating facilitators related to team performance, sharing information, and organizational conditions.

Facilitators of team performance, for example, good relationships between team members who understand each other's involvement, enable IPC.<sup>20,31,34,40–45,47,48,50,51</sup> These relationships between team members further improve IPC through effective communication.<sup>22,31,32,39,42,43,45,46,48–50,52,54</sup> However, to deliver

comprehensive care for older patients with multimorbidity, relationships need to evolve into solid relationships. This will be achieved when relationships between team members match with established values related to organizational conditions. The significant contribution of solid relationships to effective service delivery is in line with research in other settings than LTC and GR.<sup>64–66</sup> Additional examples of facilitators of IPC related to sharing information are conducting shared multidimensional patient assessments, working with a shared vision, and shared goals related to team performance.<sup>31,34,40,41,44–46,48–50,51,53</sup>

However, IPC will only be enhanced when factors related to team performance and sharing information are also facilitated by appropriate organizational conditions. For example, unfavorable conditions within the organization will negatively impact team performance and sharing information, and thereby limit IPC. Studies in different settings reveal the importance of working with multidimensional patient assessments, shared goals, and the necessity of a shared planned approach related to organizational conditions.<sup>65,67,68</sup> Additional research in other settings provides evidence of increased patient satisfaction with care when team members shared knowledge, and worked with shared goals.<sup>64,67,69</sup>

To enhance research on IPC, to contribute to the generalizability and comparability of studies, and to avoid interchangeable use of concepts with different meanings, a clear shared definition of IPC is necessary.<sup>6,19,70</sup> When collaborating to provide the best care possible in the LTC and GR, the quality of care and therefore the quality of IPC, based on all 3 interdependent themes, has to be evaluated regularly. Evaluations will support teams, managers, and policy makers, to anticipate frequently on changing factors that influence IPC.

#### Strength and Limitations

The strengths of this review include the comprehensive search strategy used, followed by a systematic evaluation of the presented data. Another strength is the systematic and solid integration of qualitative and quantitative results. All themes were covered by studies with varying methodologies; only minor differences were observed. Consequently, the themes resulting from our analysis reveal

the most essential facilitators and barriers regarding IPC in LTC. Another strength relates to including only studies with a clear definition of IPC, although this may have led to missing studies. However, there are also some limitations. One limitation is the relatively small number of studies in GR, so caution is indicated when generalizing the results to this setting. Other limitations are that the quality of the 5 included editorials could not be checked, and we did not perform a separate search specifically for instruments to assess IPC.

## Conclusions and Implications

Our study identified 3 main themes in which the facilitators of and barriers to IPC in the LTC and GR setting could be grouped, that is, Team performance, Sharing information, and Organizational conditions. The themes can be viewed as interdependent. To optimize IPC, it is necessary to stimulate facilitators and limit barriers related to all 3 themes. The few studies within the GR setting highlight the need to further examine IPC within this setting to optimize care. In addition, we advise teams, policy makers, and future studies to begin with a well-defined description of IPC, and to use or develop a reliable, validated instrument to assess IPC in LTC and GR.<sup>6,19,56,70</sup> Evidently, successful IPC when caring for patients with multimorbidity in LTC and GR requires integration, understanding, and recognition of the interdependency of themes by all persons involved, including patients and family caregivers.<sup>3</sup>

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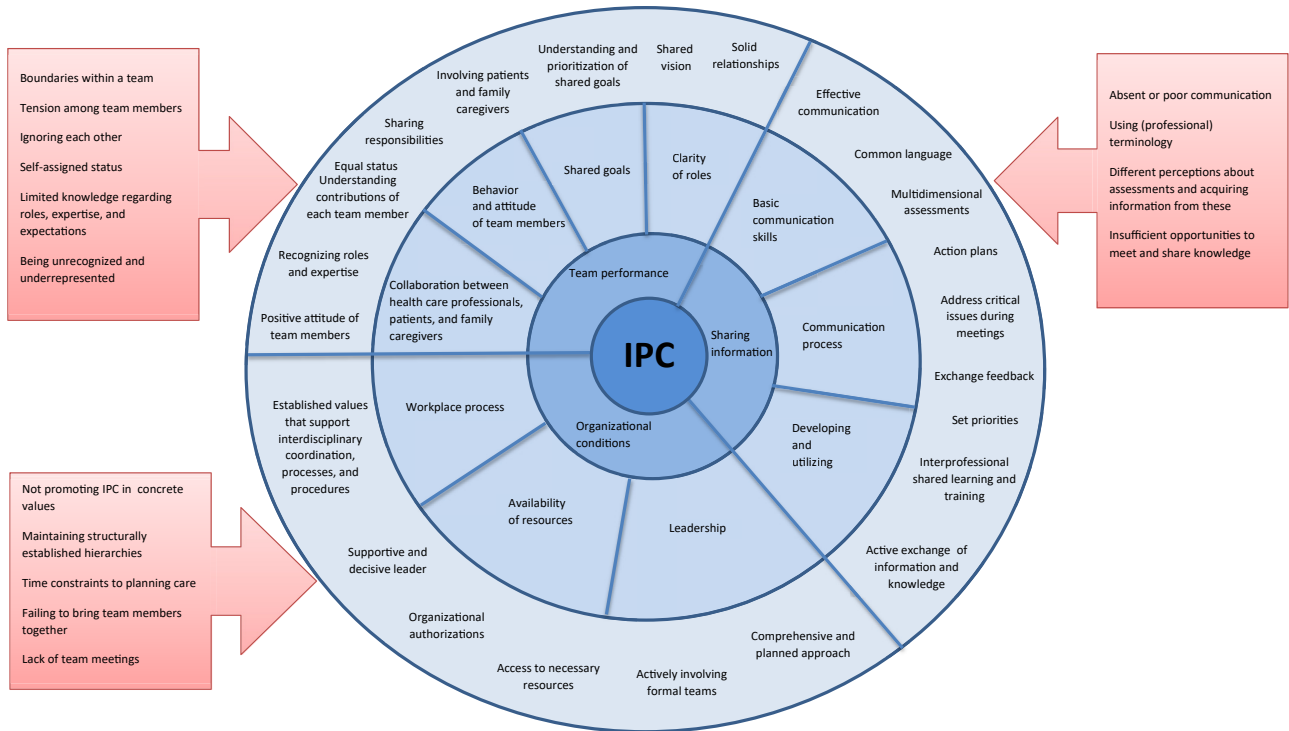
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**Supplementary Material 1.****Search strategies PubMed, Embase, Emcare, Web of Science, Cochrane Library, PsycINFO, CINAHL**

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**Supplementary Figure 1.** A schematic overview of facilitators of and barriers to interprofessional collaboration (IPC) in long-term care and geriatric rehabilitation.