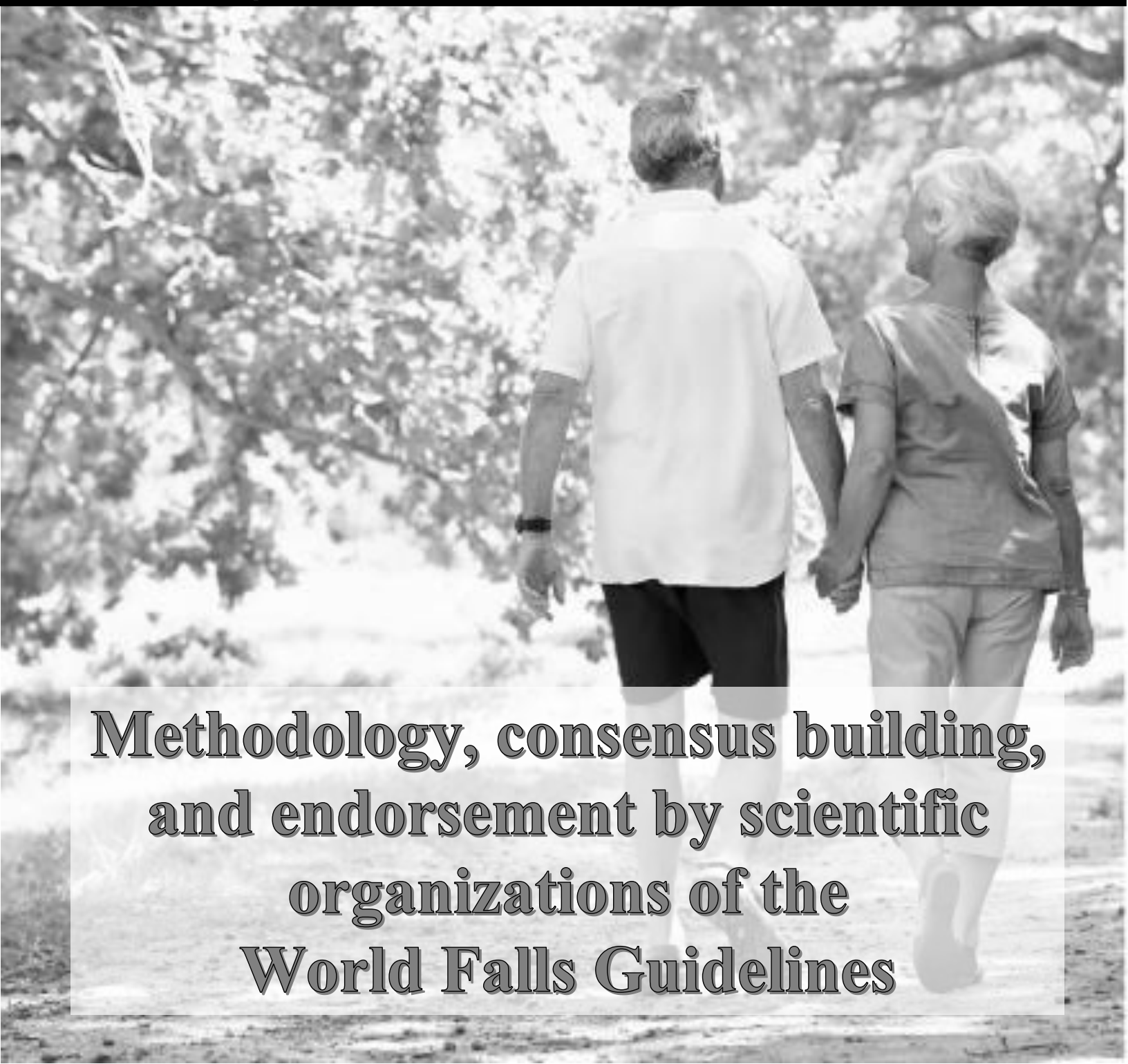# Appendix 1

# Methodology, consensus building, and endorsement by scientific organizations of the World Falls Guidelines

APPENDIX 1. METHODOLOGY, CONSENSUS BUILDING, AND ENDORSEMENT BY SCIENTIFIC ORGANIZATIONS

An International Interdisciplinary Collaboration

This work represents a worldwide collaboration of 96 experts from 39 countries and across 5 continents, with representation from 36 recognized scientific and academic societies. Leaders by country can be seen in the e-Supplementary Table 1 and prior publications [1]. A globally representative Steering Committee of 21 experts guided the project and established the overall guideline development strategy, reviewed progress against pre-determined milestones, and developed solutions to challenges met. An international Experts Group composed of individuals from 39 countries provided feedback during a Delphi process as an external review group.
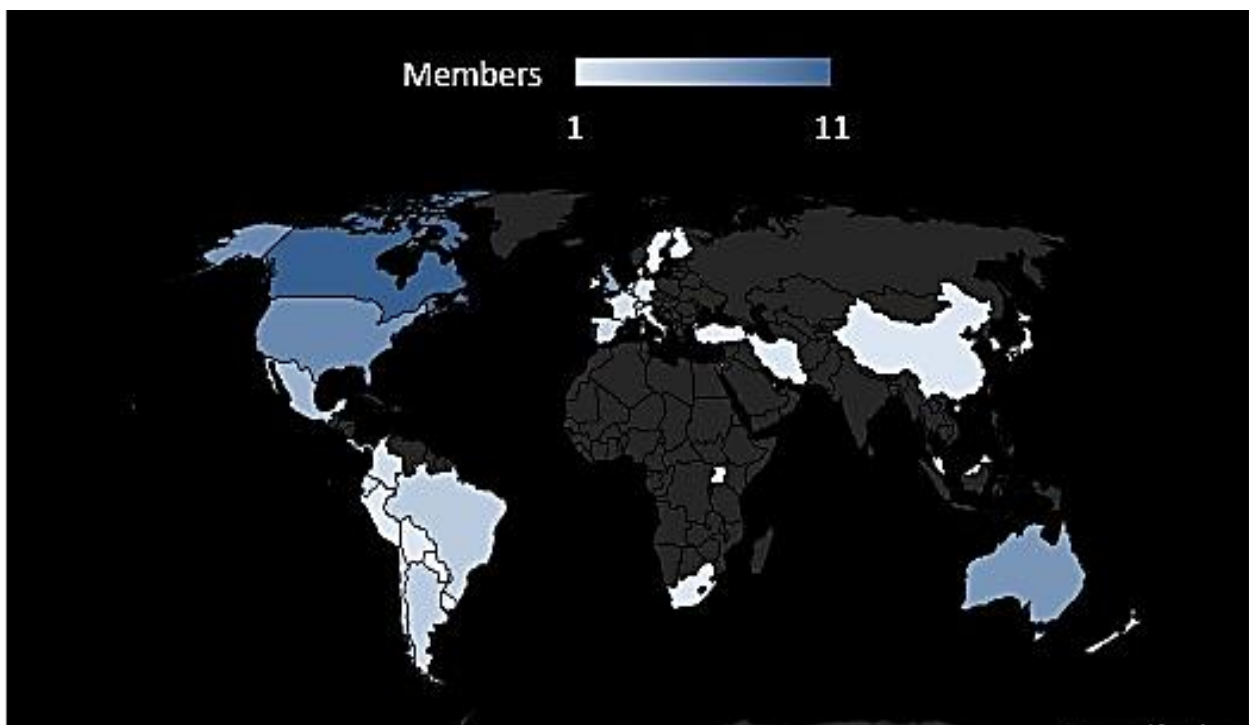
Level of representation from countries across the globe (darker shades of blue indicate higher representation). More information about this international initiative on falls prevention is at: https://worldfallsguidelines.com

Twelve working groups (WG) were created. Eleven WGs comprising methodology experts, clinicians and researchers, specialised in the designated area, addressed distinct fall-related

subjects previously described as being in need for update or development as depicted in the systematic review of guidelines [1]: gait and balance assessment tools to assess risks for falls; medication management; cognition and falls; assessment and treatment options for cardiovascular and haemodynamic factors; exercise interventions; multifactorial interventions for falls; falls in hospitals and care homes; Parkinson's disease and falls; technology for falls assessment and interventions; falls in low- and middle- income countries and on concerns (fear) of falling.. A twelfth WG considered patient perspectives as a cross-cutting theme.

Working Methods

Each topic-specific WG developed preliminary evidence-based recommendations, presented in terms of both their strength (weak-conditional to strong) and the quality of the underlying evidence (from low -C-, moderate -B-, to high -A-) using a modified version of the Grading of Recommendations, Assessment, and Evaluation (GRADE) criteria [2] (https://gdt.gradepro.org/app/handbook/handbook.html#h.svwngs6pm0f2). WGs also provided detailed decision-making tables which set out the evidence (e-supplement 3), justification statements for the recommendations, recommendation details where this was thought necessary for clarification, and practical tips based on the literature and expert consensus. When the review of the evidence failed to identify any quality studies meeting standards set or evidence was not available, recommendations were formulated by expert consensus of the working group.

For clinical areas not covered by a WG, but considered relevant by the Steering Committee, ad hoc expert groups performed rapid reviews of the literature and provided accompanying recommendations which were marked as 'E' (expert advice recommendations). In addition, an ad hoc working group of 8 experts developed a falls assessment and management algorithm, linking risk stratification, assessment, and interventions, based on the evidence provide by the WGs.

The international Experts Group provided feedback on the preliminary recommendations through a four-stage modified Delphi process.[1] Briefly, in the first and second stages, individual members of the Experts Group provided on-line comments and suggestions on these recommendations. The third stage consisted of the steering group consolidating all the feedback received and providing it to each WG for them to reconsider and revise their recommendations.

The fourth and last stage was the voting on each revised recommendation to determine if they were approved or rejected. Participants in this voting were the Steering Committee members, working group leaders, and two representatives per country of the "world expert group". Separately, members of a patient panel reviewed the recommendations through a series of 3 facilitated 60-minute virtual meetings.

At a final 2-day workshop, WG group leaders presented the results of the initial voting and the feedback from patients' panel meetings to the steering committee. Final recommendations were selected based on a pre-established rubric, which is as follows:

- Recommendations with ≥80% of votes in favour during the initial round of voting were deemed to have high support, were approved and became part of the final falls guidelines.
- Recommendations with 0-49% of votes in the initial round of voting were deemed to have low support and were not approved.
- Recommendations obtaining 50-79% of votes were deemed to have partial support and were discussed and modified at the final workshop to reach consensus for either approval (≥80%vote in favour) or rejection (<80% support).

From the 96 experts invited, 72% of the experts voted to endorse or reject the 60 final recommendations from the 12 working groups. 73% of the recommendations were fully endorsed as presented, 27% of the recommendations were endorsed with comments (i.e., not fully endorsed), and none of the recommendations were fully rejected, although 12% of the recommendations received more than 10% rejection.

Obtaining the Perspectives of Older Adults
- These guidelines incorporated input from older adults throughout the consensus process, with the goal of ensuring that the final recommendations addressed the perspectives of older adults residing in the community. This was done in several ways:
  - During the development phase, critical appraisal of the protocol paper [1] by an older adult representative was obtained with adaptions proposed by them acted on.

- Working Group (WG) 11 (Perspectives of Older Adults) was established to oversee this as cross-cutting theme [1]. The methods used to accomplish this work are described below [3].

- A literature review was performed on the perspectives of older adults living in the community about falls, and findings were used to develop recommendations (please see WG 11 report).

- All other WGs were encouraged to include the perspectives of older adults with lived experience of falls in their deliberations. The approach used to do this was left up to the WGs. Commonly used strategies were literature reviews, incorporating previously collected data on preferences and priorities, and/or interviews with older adults with lived experience of fall that focused on the specific WG topic done locally in their preferred language.

- A panel of older adults with lived experience of falls (i.e., recently fallen or were concerned about falls) was recruited to review the recommendations before finalization. Potential candidates were identified by WFG steering committee and WG members. They had to be fluent in English, have access to a computer and be comfortable with participating in a virtual meeting. Thirteen were identified. After being briefed on what participation would entail, four agreed to take part (1 female/ 3 males, age range 72-89 years/ average 78.75 years; 2 had fallen/ 2 were concerned about falling; 3 from Canada/ 1 from the United States). Their input was obtained through a series of 3 facilitated (by the lead of WG 11), semi-structured 30-60 minute virtual meetings (one meeting had two participants) that were recorded. An agenda, all the recommendations, and specific questions to be covered were shared prior to their scheduled meeting. The specific questions addressed dealt with terminology (in an effort to obtain consistency and avoidance of terms that incited a negative reaction) and the recommendations made by WG 10 (multifactorial assessment and interventions in order to address questions of feasibility and burden from the perspective of older adults) and WG 11. Participants were also invited to provide feedback on the other recommendation, gaps, and any additional comments they wished to make. This information was summarized in an anonymised fashion and shared with participants of the meeting where recommendations were

finalised. The lead of WG 11 took part in this meeting. The older adult panel feedback was considered and led to changes in a number of the recommendations.

References

1.   Montero-Odasso M, van der Velde N, Alexander NB, Becker C, Blain H, Camicioli R, et al. New horizons in falls prevention and management for older adults: a global initiative. Age Ageing. 2021 Sep 11;50(5):1499-507.
2.   Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Alonso-Coello P, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ. 2008 Apr 26;336(7650):924-6.
3.   Goodman SM, Miller AS, Turgunbaev M, Guyatt G, Yates A, Springer B, et al. Clinical Practice Guidelines: Incorporating Input From a Patient Panel. Arthritis Care Res (Hoboken). 2017 Aug;69(8):1125-30.