Backgrounder

THURSDAY, JANUARY 28, 2021
FOR IMMEDIATE USE

About The APCO Framework

Purpose of The APCO Framework

- Anecdotal evidence to date demonstrates significant disparity in osteoporosis clinical practice guidelines in the Asia Pacific region.
- As its first major initiative, APCO members representing key osteoporosis stakeholders and multiple medical and surgical specialties, developed a set of clear, concise, relevant and pragmatic clinical standards to support national societies, guidelines development authorities, and health care policy makers with the development of new guidelines, and to encourage the revision of existing guidelines.

About The APCO Framework

- The APCO Framework, published January 27, 2021, represents the first pan-Asia Pacific clinical practice standards for the screening, diagnosis and management of osteoporosis, targeting a broad range of high-risk groups.
- Published in Osteoporosis International, 'The APCO Framework' comprises 16 minimum clinical standards that serve as a benchmark for the provision of optimal osteoporosis care in the region.
- Implementation of the minimum clinical standards proposed by The APCO Framework, and reform of existing guidelines, will support clinical improvement initiatives, while also helping to pave the way for a more holistic approach to osteoporosis care, and ultimately, greater consistency across all national and regional clinical practice guidelines in the Asia Pacific
- Implementation of The Framework, or a similar set of standards of care informed by The Framework, is expected to significantly reduce the burden of osteoporosis in the Asia-Pacific region, and worldwide.
- The APCO Framework aims to provide clinicians with structured, well-articulated and readily accessible clinical practice guidelines that clearly define:
    - Individuals to be identified for assessment;
    - Investigations required;
    - Relevant indications for treatment;
    - Appropriate selection of interventions to be made;
    - The guidance and information patients need for self-care;
    - Integration of healthcare systems for optimal provision of care; and
    - The need, and methods for monitoring and improving the quality of osteoporosis care.

Development of The APCO Framework

- APCO employed a 5IQ analysis to evaluate clinical practice guidelines currently available in Asia Pacific.
- A subsequent comprehensive, four-round Delphi consensus method enabled APCO members to reach agreement on a benchmark set of clinical standards for the provision of quality osteoporosis care for the Asia Pacific region.
- To develop The Framework, APCO:[1]

I. Conducted a systematic, structured analysis of existing guidelines in the Asia Pacific region;

II. Identified regionally relevant key guidelines elements and

III. Using a structured consensus process, developed feasible regional clinical care standards designed to support clinical improvement initiatives, and to provide a Framework for adaptation and adoption throughout the region.

- The 5IQ model used for analysing the content of the clinical practice guidelines accounted for the following:[2]
  - *Identification* – A statement of which individuals should be identified;
  - *Investigation* – A description of the types of investigations to be undertaken;
  - *Information* – A description of the type of information to be provided to an individual;
  - *Intervention* – A description of pharmacological interventions and falls prevention;
  - *Integration* – A statement on the need for integration between primary and secondary care; and
  - *Quality* – A description of professional development, audit, and peer review activitities.
- The 5IQ exercise assessed the extent of heterogeneity when comparing the national guidelines currently available throughout the Asia Pacific.
- From each guideline, information was gathered on case identification, investigations, patient advice and education, interventions, strategies for long-term management and integration of osteoporosis into health systems, strategies to promote the delivery of quality clinical care and other background data.

Findings from the 18 clinical guidelines examined using the 5IQ analysis revealed marked disparity in recommendations:

Identification

- The most commonly cited risk factors for osteoporosis included excessive alcohol consumption, family history of osteoporosis and/ or fracture, smoking, low body mass index (BMI), height loss, age (70 years or over), and early menopause.
- Rheumatoid arthritis, malabsorption, hyperthyroidism, multiple myeloma and diabetes were among the medical conditions listed as common risk factors for osteoporosis.

Investigations

- Investigations included in the various clinical guidelines examined canvassed biochemical tests, risk assessment tools, vertebral fracture assessments, falls risk assessment and specialist assessment.

Information

- All guidelines recommended the provision of information on calcium intake, and all but one endorsed information on exercise, while only a portion of the guidelines recommended the provision of information to patients on sun exposure and fracture risk.

Interventions

- Intervention recommendations included pharmacological treatment options, adjunctive treatments and falls prevention programs. Various guidelines comprised specific directions on adverse effects, monitoring therapeutic response, and long-term follow up, treatment duration and adherence.

Integration

- Only two of the guidelines clearly demonstrated the need for a long-term care plan to be devised and provided to the patient or their primary care provider.

Quality

- There was a lack of guidance on the audit of practice standards or the need for continuing professional development (CPD) and learning for health care professionals (HCPs).

The Delphi process

- The Delphi technique (a structured communication technique using a systematic, interactive forecasting method reliant upon an expert panel) was employed to achieve APCO member consensus for the development of clinical standards of care.[3]

Delphi rounds

- **Round 1** – APCO members were invited to complete an online survey comprising 32 questions, to determine which aspects of care warranted development of specific clinical care standards. From this first round of the Delphi analysis, notable findings were identified, the Framework structure was determined, and the 16 draft clinical standards were established.
- **Round 2** – Articulation of the 16 clinical standards and relevant levels of attainment for certain standards were proposed for consensus.
- **Rounds 3 & 4** – Wording of the clinical standards and relevant levels of attainment were reviewed, amended and finalised.

16 Clinical standards

Minimum standards for osteoporosis care that are relevant, pragmatic, and feasible to implement for the Asia Pacific region.

Clinical standard 1.
Men and women who sustain a fragility fracture should be systematically and proactively identified to undergo assessment of bone health and, where appropriate, falls risk.

Levels of attainment for clinical standard 1:

- Level 1: Individuals who sustain hip fractures should be identified.
- Level 2: Individuals who sustain hip and/or clinical vertebral fractures should be identified.
- Level 3: Individuals who sustain hip, clinical and/or morphometric vertebral, and/or non-hip, non-vertebral major osteoporotic fractures should be identified.

Clinical Standard 2.
Men and women with common risk factors for osteoporosis should be proactively identified to undergo assessment of bone health and, where appropriate, falls risk. A sex-specific age threshold for assessment should be determined for each country or region, and included in new or revised osteoporosis clinical guidelines.

Clinical Standard 3.
Men and women who take medicines associated with bone loss and/or increased fracture risk should be proactively identified to undergo assessment of bone health and, where appropriate, falls risk. Commentary should be included in new, or revised osteoporosis clinical guidelines, to highlight commonly used medicines associated with bone loss and/or increased fracture risk.

Clinical Standard 4.
Men and women who have conditions associated with bone loss and/or increased fracture risk should be proactively identified to undergo assessment of bone health. Commentary should be included in new, or revised osteoporosis clinical guidelines, to highlight common prevalent conditions in the country or region.

Clinical Standard 5.
The use of country-specific (if available) fracture risk assessment tools (e.g. FRAX®, Garvan, etc.) or osteoporosis screening tools (e.g. OSTA) should be a standard component of investigation of an individual's bone health and prediction of future fracture risk and/or osteoporosis risk.

Clinical Standard 6.
Assessment for presence of vertebral fracture(s) either by X-ray (or other radiological investigations such as CT or MRI) or DXA-based VFA should be a standard component of investigation of osteoporosis and prediction of future fracture risk.

Levels of attainment for clinical standard 6:

- Level 1: Individuals presenting with clinical vertebral fractures should undergo assessment for osteoporosis.
- Level 2: Individuals with incidentally detected vertebral fractures on X-ray and/or other radiological investigations should be assessed for osteoporosis.
- Level 3: Individuals being assessed for osteoporosis should undergo spinal imaging with X-ray or other appropriate radiological modalities, or with DXA-based VFA.

Clinical Standard 7.
A falls risk assessment should be a standard component of investigation of an individual's future fracture risk.

Clinical Standard 8.
In order to engage individuals in their own care, information should be provided on calcium and vitamin D intake, sun exposure, exercise, and the relationship between osteoporosis and fracture risk.

Clinical Standard 9.
The decision to treat with osteoporosis-specific therapies, and the choice of therapy should be informed as much as possible by, country-specific and cost-effective intervention thresholds. Intervention thresholds that can be considered include:

- History of fragility fracture;
- BMD T-Score ≤ –2.5 S.D.; and
- High fracture risk as assessed by country-specific intervention thresholds.

Clinical Standard 10.
New or revised osteoporosis clinical guidelines should include commentary on the common side-effects of pharmacological treatments that are recommended in the guidelines.

Clinical Standard 11.
New or revised osteoporosis clinical guidelines should provide commentary on monitoring of pharmacological treatments. This could include, for example, the role of biochemical markers of bone turnover and BMD measurement.

Clinical Standard 12.
New or revised osteoporosis clinical guidelines should provide commentary on the duration of pharmacological treatments recommended in the guidelines. This should include a discussion on the appropriate order of sequential treatment with available therapies, and the role of 'drug holidays'.

Clinical Standard 13.
Assessment of adherence to pharmacological treatments recommended in new or revised osteoporosis clinical guidelines should be undertaken on an ongoing basis after initiation of therapy, and appropriate corrective action be taken if treated individuals have become non-adherent.

Clinical Standard 14.
New and revised osteoporosis clinical guidelines should provide commentary on recommended non-pharmacological interventions, such as exercise and nutrition (including dietary calcium intake) and other non-pharmacological interventions (e.g. hip protectors).

Clinical Standard 15.
In collaboration with the patient, the treating clinician (hospital specialist and/or primary care provider) should develop a long-term management plan that provides recommendations on pharmacological and non-pharmacological interventions to improve bone health and, where appropriate, measures to reduce falls risk.

Clinical Standard 16.
New or revised osteoporosis clinical guidelines should provide commentary on what quality metrics should be in place to assess adherence with guideline-based care.

Levels of attainment for clinical standard 16:

- Level 1: Conduct a local 'pathfinder audit' in a hospital or primary care practice to assess adherence to APCO Framework Clinical Standards 1–9, 13 and 15.
- Level 2: Contribute to a local fracture/osteoporosis registry.
- Level 3: Contribute to a fracture/osteoporosis registry for your country or region.

Application of The APCO Framework

- Development of The APCO Framework offers APCO members the opportunity to invite their clinical peers to perform 'pathfinder baseline audits' of adherence to The Framework's standards of care within their respective hospitals, enabling the establishment of baseline levels of adherence with the standards proposed by The Framework, region-wide.

About APCO

The Asia Pacific Consortium on Osteoporosis (APCO) comprises osteoporosis experts from several countries and regions in the Asia Pacific, charged with developing tangible solutions to the substantive challenges involving osteoporosis management and fracture prevention in this most populated and fastest growing part of the world. APCO's mission is to engage with relevant stakeholders, including healthcare providers, policy makers and the public, to help develop and implement country and region-specific programs for the prevention and treatment of osteoporosis, and its complication of fragility fractures, in the Asia Pacific.

ends#

For more information pertaining to The APCO Framework, please contact:
Kirsten Bruce & Mel Kheradi, VIVA! Communications, Sydney, Australia
T +61 (0)401 717 566; +61 (0)421 551 257
E kirstenbruce@vivacommunications.com.au; mel@vivacommunications.com.au

References

1. Chandran, M., et al., *Development of the Asia Pacific Consortium on Osteoporosis (APCO) Framework: clinical standards of care for the screening, diagnosis, and management of osteoporosis in the Asia-Pacific region.* Osteoporosis International, 2021.

2. National Osteoporosis Society. *Effective Secondary Prevention of Fragility Fractures: Clinical Standards for Fracture Liaison Services* [cited Jan, 2020]; Available from: https://theros.org.uk/media/2082/clinical-standards-for-fracture-liaison-services.pdf.
3. Royal College of Obstetricians and Gynaecologists. *The Delphi technique*. 2005 [cited Jan, 2020]; Available from: https://obgyn.onlinelibrary.wiley.com/doi/pdf/10.1576/toag.7.2.120.27071.