

New Development Process for Practice Guidelines of the American Psychiatric Association

Background and Overview

The guideline development process described in this document was approved by the APA Steering Committee on Practice Guidelines on September 8, 2011. It is intended to meet standards for the development of “trustworthy” practice guidelines recommended by the Institute of Medicine (IOM) in a report published in March 2011.¹ The standards address transparency, management of conflicts of interest, composition of work groups, use of systematic reviews of evidence, articulation and rating of recommendations, external review, and updating.

Other recent reports also provide standards or principles for development of guidelines, including the American Medical Association’s (AMA’s) Physician Consortium for Performance Improvement,² the AMA Board of Trustees,³ and the Council of Medical Specialty Societies.⁴ APA’s process has been informed by these reports as well as by innovative development processes used by other medical specialty societies including the American College of Chest Physicians⁵ and the American Society of Anesthesiologists.⁶

The process also builds upon APA’s previous guideline development process,⁷ which was designed to be aligned with principles described in early IOM^{8,9} and AMA¹⁰ reports. Under the previous process, APA developed 23 practice guidelines over approximately 20 years, including multiple second and third editions, beginning with a first-edition guideline on eating disorders, published in 1992, and concluding with a third-edition guideline on major depressive disorder, published in 2010. Fourteen of these guidelines remain available in print compendiums from American Psychiatric Publishing and online on www.psychiatryonline.org, and seven remain included in the Agency for Healthcare Research and Quality’s (AHRQ’s) National Guideline Clearinghouse at www.guideline.gov.

The following elements of APA’s previous development process remain included in the new process described in this document:

- Appointment of work groups that are balanced with respect to expertise, geographical location, and demographic background
- Disclosure of potential financial conflicts of interest by work groups on appointment, during development, and on publication
- Limits on the participation of individuals with potential conflicts of interest, e.g., from significant financial relationships with industry
- Rigorous review of supporting evidence
- Broad, iterative review of guideline drafts

APA Practice Guideline Development Process

- Approval of guidelines by the APA Assembly and Board of Trustees

In addition, the new process adds the following elements intended to make APA guideline development more transparent and rigorous, in line with the 2011 IOM recommended standards:

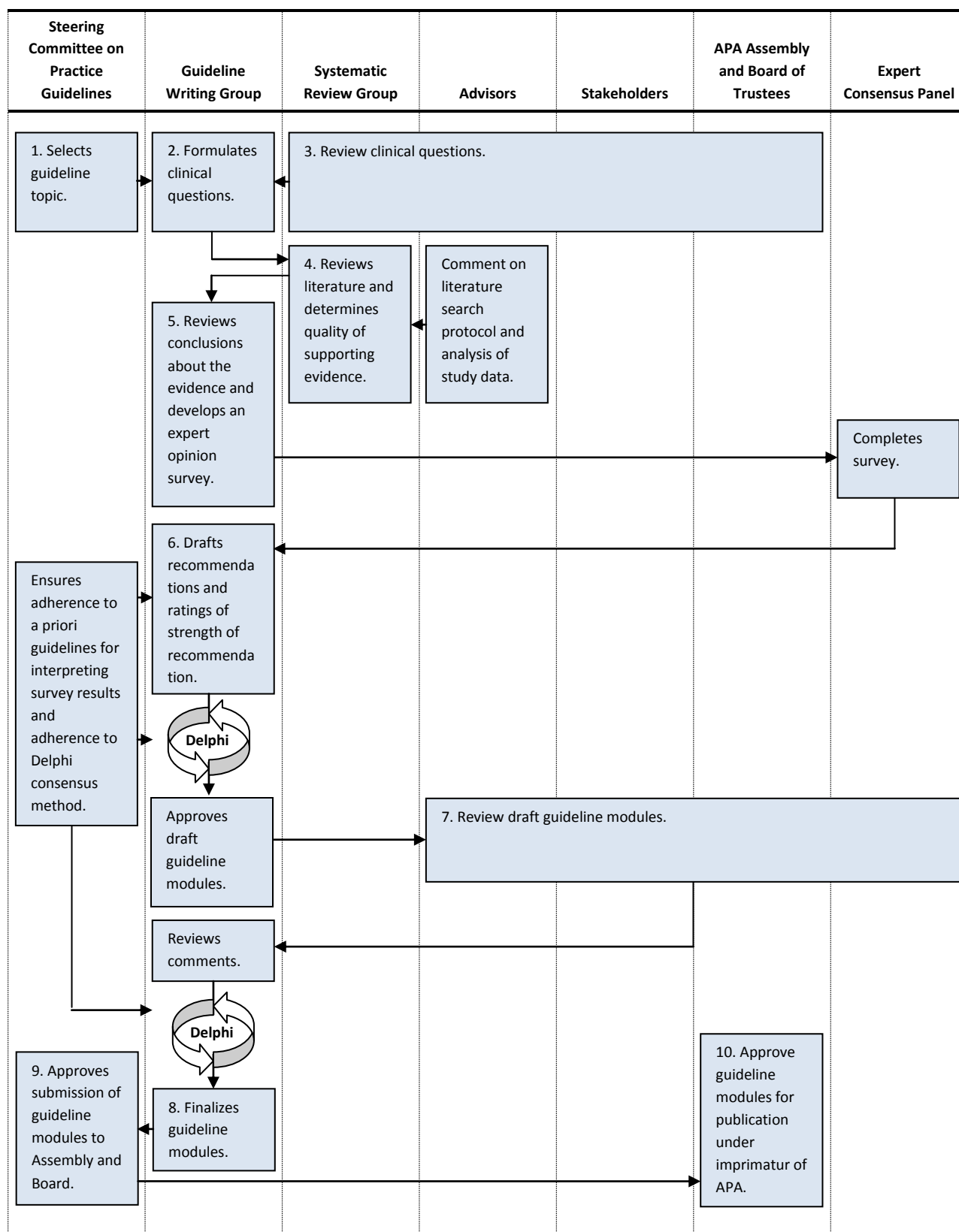
- Guidelines are organized around specific clinical questions in PICO(TS) format, i.e., patient, intervention, comparison, outcome, and when applicable, timing and setting.
- Separate groups review evidence and write guidelines: a Systematic Review Group (SRG) and a Guideline Writing Group (GWG).
- The SRG and GWG receive input from advisors who are subject matter experts, multidisciplinary experts, methodologists, and patient/family advocates.
- Guideline recommendations are separately rated according to quality of supporting evidence and strength of recommendation, using a modified GRADE method.¹¹
- Expert opinion is determined by formal survey of large panels of research and clinical experts, who are identified using a blind “snowball” nomination process.
- Consensus about guideline recommendations and ratings is determined by modified Delphi method, i.e., through blind iterative voting.
- Guidelines are published as “modules,” i.e., as standalone sets of recommendations, each addressing a specific clinical question.
- After guideline publication, new evidence is identified by continuous monitoring of the literature, and guideline modules are updated in a targeted fashion if there are important changes in the supporting evidence.

Figure 1 shows a flow chart for the new development process.

This is a living document that will be updated as the new process is implemented and tested. The process used to develop specific guideline modules will be described on their publication. Because of continuous innovation and improvement, the process used may not necessarily match what is described here. This document describes the process to be used for APA practice guidelines to be developed going forward.

Conflict of interest policy for participants in APA practice guideline development is determined by the APA Board of Trustees. This document summarizes the current policy. The full policy is described in the APA Operations Manual, which is available from the APA Department of Governance at <http://www.psychiatry.org/about-apa--psychiatry/governance>.

Figure 1. Development Process Flow Chart



Organizational Structure

The following groups participate in approval, development, and review of APA practice guidelines:

Approval

- APA Board of Trustees
- APA Assembly

Development

- Steering Committee on Practice Guidelines (SCPG)
- Guideline Writing Group (GWG)
- Systematic Review Group (SRG)
- APA staff and consultants

Review

- Advisors
- Reviewers
- Expert Consensus Panels

Individuals in each group are subject to different participation rules, as described in the following. These rules are intended to minimize potential bias from conflicts of interest and are considered by APA to be consistent with the 2011 IOM standards and with principles recommended by the Council of Medical Specialty Societies.¹²

APA Board of Trustees and Assembly

The APA Assembly and Board of Trustees are composed of APA members who are elected by the APA membership. The Assembly is a deliberative body of approximately 200 representatives from district branches of the association as well as representatives of specific minority/underrepresented groups, members-in-training, and early career psychiatrists. The Assembly advises on and recommends actions to the Board of Trustees. The Board is composed of 14 voting members, who govern the association through an executive process.

The Assembly provides input to the SCPG at multiple steps of the guideline development process, including prioritization of potential topics and identification of experts for consensus panels. The Assembly also provides substantive review of draft clinical questions and draft guidelines.

The Assembly recommends and the Board of Trustees votes to approve publication of new practice guidelines under the imprimatur of APA. Guideline updates may be approved by the respective executive committees of the Assembly and the Board.

A Board of Trustees Conflict of Interest Committee determines conflict of interest policy for APA including for the SCPG and for guideline work groups. The Conflict of Interest Committee reviews disclosures by candidates for the SCPG and work groups before their appointment by the APA President.

Steering Committee on Practice Guidelines

The role of the SCPG is to define the APA guideline development process and ensure adherence to the process, including use of methods established a priori to determine ratings of quality of evidence and strength of recommendation and procedures established a priori to determine consensus. On the basis of fidelity to process, the SCPG approves submission of finalized guidelines to the APA Assembly and Board for association approval.

The SCPG is comprised of 9 members plus consultants, fellows, and liaisons including 7 liaisons from the APA Assembly. Six members of the committee serve as the Executive Committee on Practice Guidelines and make decisions for the SCPG as needed.

Members of the SCPG are vetted by the Board of Trustees Conflict of Interest Committee and appointed by the APA President. They serve for 3-year terms with the possibility of one renewal, and members of the Executive Committee serve for 5-year terms with the possibility of one renewal. In accordance with APA policy, members of the SCPG including the Executive Committee must make annual disclosures and may not receive >\$10,000 per year from industry work excluding grants. All members currently have zero ties with industry.

Any member of the SCPG who has a financial conflict is asked to recuse him- or herself from voting on decisions about relevant guidelines.

Guideline Writing Group

The role of the GWG is to write guidelines and determine ratings of strength of recommendation. The group consists of 8–10 volunteer APA members who are psychiatrists with general research and clinical expertise. Members are identified by the SCPG, vetted by the Board of Trustees Conflict of Interest Committee, and appointed by the APA President. Each member serves a 5-year term, with the possibility of one reappointment.

All members of the GWG must make disclosures on appointment, at regular intervals during their terms, and on publication. In accordance with APA policy, the GWG chair and vice-chair may not receive >\$10,000 per year from industry work excluding grants. Individuals with zero industry ties are preferred. Any member of the GWG who has a financial conflict is asked to recuse him- or herself from voting on relevant recommendations and ratings.

In addition to diversity of expertise, the GWG is preferred to have diversity with respect to characteristics such as geographical location and demographic background. The GWG may include psychiatrists who are double boarded or additionally trained in primary care or specialties such as neurology or internal medicine.

The GWG receives authorial credit for published guidelines, with the chair of the GWG serving as first author.

Systematic Review Group

The role of the SRG is to perform systematic reviews of evidence on specific clinical questions including determining ratings of quality of evidence. The SRG also reviews and endorses systematic reviews

available from other sources including the Cochrane Collaborative and AHRQ. The SRG also nominates topics for AHRQ development of systematic reviews.

The SRG consists of individuals including APA members who have specific training or background in systematic review methodology. Their number depends on the amount of work required to search, screen, and review available evidence for guidelines under development. Some or all members of the group work on contract or by employment with APA rather than as volunteers. Terms are determined by contract.

The chair of the SRG serves as the vice-chair of the GWG. Other members of the SRG and the GWG do not overlap.

Members of the SRG must make disclosures on appointment, at regular intervals during their terms, and on publication. In accordance with APA policy, the SRG chair and vice-chair may not receive >\$10,000 per year from industry work excluding grants. Individuals with zero industry ties are preferred. Any member of the SRG who has a financial conflict is asked to recuse him- or herself from voting on relevant ratings of quality of evidence.

Members of the SRG are acknowledged on guideline publication.

APA Staff

APA staff implement the guideline development process and publish the guidelines under the imprimatur of APA. They include managerial, administrative, publications, and library staff.

Advisors

Individuals with expertise on specific topics or who are experts from other professions or disciplines or who are patient/family advocates provide input to the GWG and the SRG as advisors rather than as regular members of either group. Advisors participate in discussion as needed and comment about literature review and guideline development but do not participate in writing evidence tables, writing guidelines, or determining guideline recommendations or ratings.

Advisors are identified by the SCPG, vetted by the Board of Trustees Conflict of Interest Committee, and appointed by the APA President. Advisors must make disclosures on appointment and at regular intervals, but there are no specific rules for participation. Advisors are appointed as needed and may number 3–4 for each major psychiatric disorder. Terms are determined according to need.

Advisors are acknowledged on guideline publication.

Reviewers

Draft clinical questions and guidelines are made available for review by APA members, stakeholders including patient/family advocacy groups, and the general public. Reviewers are asked to disclose relevant conflicts of interest.

Expert Consensus Panels

Expert opinion about interventions that may be recommended in APA guidelines is determined by formal survey of large expert panels. Panels include two categories of experts, research experts and clinical experts:

Research experts are individuals who are making substantial contributions with respect to research and scholarly writing in a guideline topic, including research funded by federal agencies and foundations. These individuals may also serve on review panels and editorial boards. These individuals are generally psychiatrists but may sometimes be researchers or scholars in disciplines other than psychiatry, including other medical specialties, psychology, nursing, social work, or pharmacology.

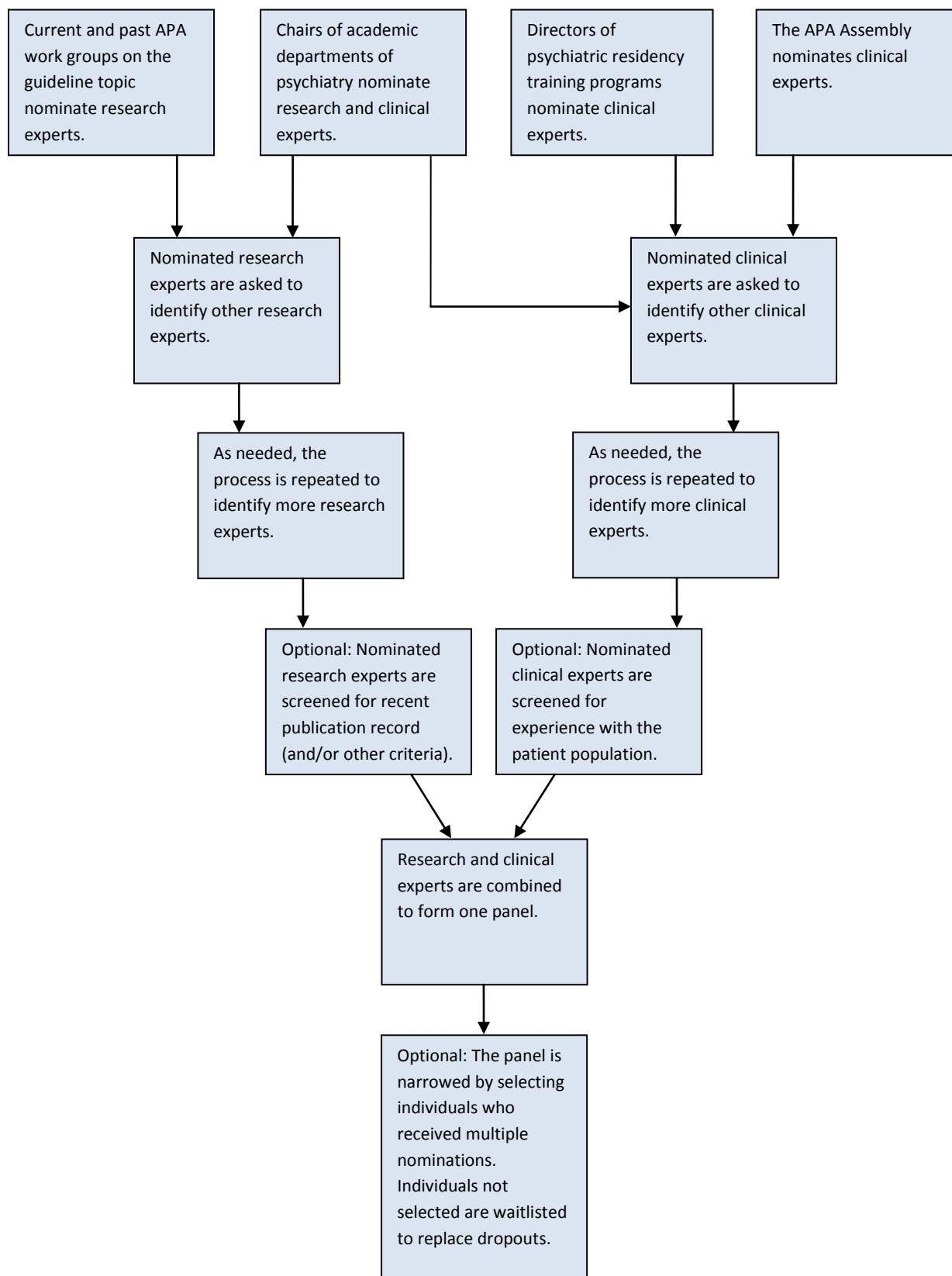
Expert clinicians are psychiatrists who are expert in the clinical care of patients, especially “real world” patients whose primary disorder is complicated by features such as pregnancy; treatment resistance or nonadherence; or co-occurring substance use, personality disorders, or general medical conditions. Such expertise also includes knowledge of patient preferences and values, including those related to ethnic and cultural considerations.

These groups are not mutually exclusive. An individual may be considered expert in both categories.

The experts are identified through a blind nomination process that is based on a “snowball” sampling method, which has been used in research studies to identify hidden populations.¹³ As shown in Figure 2, the nomination process begins with the following groups:

- *Current and past APA work groups* include psychiatrists who are expert in specific psychiatric disorders and conditions. These individuals are asked to nominate research experts.
- *Chairs of academic departments of psychiatry* head complex clinical and research programs. They are therefore keenly familiar with the research and scholarly experts in their regions. Additionally, they are frequently called upon by members of their larger academic communities to make clinical referrals. There are approximately 200 chairs in the United States. Chairs are asked to nominate both research and clinical experts.
- *Directors of psychiatric residency treatment programs* are involved in the care of a variety of patients and are responsible for the training of resident psychiatrists on a variety of treatment modalities to satisfy competency requirements of the Residency Review Committee. Directors are well connected to a large number of psychiatrists in their communities who serve as clinical faculty and are therefore expected to have contacts with experts across the spectrum of psychiatric care. There are approximately 180 directors in the United States, Canada, and Puerto Rico. Directors are asked to nominate clinical experts.

Figure 2. Process for Forming an Expert Consensus Panel



APA Practice Guideline Development Process

- *The APA Assembly* is a geographically representative sample of American psychiatrists who have diverse interests and areas of expertise. Because of their political role, Assembly members are socially connected with clinicians across the United States, both within and outside of academia. Voting members of the Assembly are asked to nominate clinical experts.

Depending on guideline topic, presidents of subspecialty organizations may also be asked to nominate research and clinical experts.

Experts nominated by the above groups are asked to nominate additional experts, and this process is repeated, i.e., “snowballed,” until a large number of experts has been identified who are diverse with respect to geography, training, research and scholarly contributions, clinical experience, and treatment orientation.

The following nomination rules apply:

- Nominators may not nominate themselves.
- Nominated individuals may be from the nominator’s region or anywhere in the world.
- Nomination is anonymous (i.e., nominated individuals are not informed as to who nominated them).

After all nominations have been collected, screening criteria may be applied:

For *research experts*, criteria may include recent publication on relevant topics in high-impact peer-reviewed journals and publication of textbooks or textbook chapters. Other criteria may include federal grant awards, membership on study sections of the National Institutes of Health, or service on the editorial boards of scholarly journals. Selection criteria may be applied through self-report questionnaire or by searches of MEDLINE and other databases.

For *clinical experts*, criteria may include recent evaluation and treatment of a sufficient number of patients with sufficient treatment intensity having relevant clinical problems or diagnoses. Experience gained through supervising the treatment of patients by other clinicians may also be incorporated into these criteria.

The specific criteria used are determined by the SCPG and the GWG and may vary depending on guideline topic.

Research and clinical experts are then combined to form one panel. Depending on how many individuals meet the screening criteria, their number may be narrowed. Individuals who receive multiple unique nominations may be selected, or individuals may be randomly selected. Individuals not selected remain on a wait list to replace dropouts.

If a nominated individual declines to participate, or does not respond to surveys, another individual may be randomly selected from the pool of nominated and screened individuals.

Because of their oversight role for the guidelines project, members of the SCPG and the APA Board of Trustees are not eligible to participate if nominated.

Development Process

The following steps describe the development process from topic selection to publication. The steps are illustrated in Figure 1. The process requires approximately 2 years from start to publication.

Step 1: The SCPG selects topics for guideline development.

Topics for potential guideline development may be nominated by any APA member.

The SCPG selects topics for development of a practice guideline according to the following criteria:

- Degree of public importance (prevalence and seriousness)
- Relevance to psychiatric practice
- Availability of systematic reviews of available evidence
- Likelihood that a guideline would improve practice and patient care
- Time since publication of practice guidelines on the topic by APA or other organizations

To help prioritize topics, the SCPG may seek input from advisors, stakeholders, the APA Assembly, and others about potential “quality gaps,” i.e., areas where usual care may not be aligned with best practice as supported by evidence or expert opinion.

Step 2: The GWG formulates clinical questions.

After the SCPG chooses a topic for guideline development, the GWG formulates 10–20 clinical questions on the topic. Whenever possible, the questions follow a PICO(TS) format, i.e., patient, intervention, comparison, outcome, and if applicable, timing and setting. This format is recommended by AHRQ.¹⁴ If more than 20 questions are needed, the GWG considers narrowing the overall scope of the guideline.

Step 3. The SRG, advisors, and stakeholders review the draft questions.

Input from the SRG, advisors, and stakeholders including patient/family advocates ensures that the GWG’s clinical questions are informed by availability of evidence, are relevant to psychiatrists in clinical practice, include outcomes that are important to patients, and address areas where quality of care may be improved.

Stakeholder groups that are invited to comment on draft questions include allied and subspecialty organizations and patient and family advocacy groups. The APA membership and the general public are also invited to comment.

The GWG revises the questions based on comments received.

Step 4: The SRG performs a systematic review of available evidence.

As part of its regular work, the SRG performs continuous searches of MEDLINE and other pertinent databases using a broad search strategy that includes all psychiatric treatment terms, with the goal of identifying all published articles on psychiatric treatments. The search results are organized in a

database and pre-screened using very broad inclusion criteria, i.e., “Is the article possibly relevant to psychiatric treatment guidelines?”

After the GWG defines clinical questions on specific topics, the SRG performs a targeted search on the database of pre-screened literature results. The results of the targeted search are screened by multiple, independent raters for relevance to the clinical questions.

If advisors who are subject matter experts indicate that unpublished data exist on a specific intervention (generally, a drug or device), the SRG also performs gray literature searches to try to confirm this and if possible obtain unpublished study protocols and data. This may include searching ClinicalTrials.gov, searching FDA online databases, searching abstracts and proceedings of scientific meetings such as the APA Annual Meeting, contacting study authors, and requesting information from the drug or device manufacturer.

After targeted search results are screened and gray literature searches are performed, the SRG reviews the results and develops evidence tables for all randomized controlled trials (RCTs) and as needed for observational studies. For each clinical question defined by the GWG, the SRG determines a rating of the quality of available evidence, using a modified GRADE method.

Under the GRADE method, the quality of a body of evidence is rated as high quality, moderate quality, or low quality. These categories reflect level of confidence in the estimate of an effect. “High quality” suggests high confidence that the true effect is close to the estimate, while “low quality” suggests limited confidence, i.e., the true effect may be substantially different than the estimate.¹⁵

Evidence from RCTs begins as “high quality” but may be downgraded for reasons including study limitations, inconsistency of results, indirectness of evidence, imprecision, and reporting bias. For example, evidence from RCTs could be rated as “moderate quality” if the RCTs have design flaws, show inconsistent results, or are not directly applicable to a clinical question because they measured different outcomes or studied different patient populations.

Evidence from observational studies including case control studies and cohort studies begins as “low quality,” but if the magnitude of the treatment effect is very large, if there is evidence of a dose-response relationship, and if all plausible biases would decrease the magnitude of an apparent treatment effect, this evidence could be upgraded to “moderate quality.”

A rating of “low quality” would generally describe evidence from observational studies that does not merit upgrading or evidence from RCTs with very serious limitations.

When systematic reviews are available from external sources such as the Cochrane Collaborative or AHRQ, the SRG uses these reviews. The SRG may endorse the conclusions of the external review, i.e., agree with the ratings of quality of evidence, or the SRG may draw independent conclusions using evidence tables from the external review in combination with internally developed evidence tables.

Step 5: The GWG reviews the conclusions of the SRG, and as needed, surveys the Expert Consensus Panel.

The process for forming an Expert Consensus Panel is described above (pages 7–9 including Figure 2).

If the evidence base supporting an intervention is judged by the SRG to be of low quality, the GWG assesses expert opinion about the intervention by formal survey of an Expert Consensus Panel. Expert opinion about interventions supported by moderate- or high-quality evidence may also be assessed. Results from the survey inform the GWG's grading of strength of recommendation, as described in step 6.

The survey questions specifically evaluate the Expert Consensus Panel's opinions about the benefits and harms of interventions as well as potential practical barriers. Questions are generally in Likert scale format but may also include some free text questions. The survey includes the SRG's review of the supporting evidence. The survey asks for demographic information, so that opinion of subgroups may be characterized, e.g., according to practice setting.

After the distribution of responses is determined for each question, appropriate measures of central tendency are calculated. When possible, depending on sample size and response rate, data from the research experts and the clinical experts may be compared to find significant differences, using appropriate statistical tests.

Survey participants are acknowledged on guideline publication.

Step 6: Based on survey data and the SRG's systematic review of evidence, the GWG drafts guideline "modules."

A guideline "module" is a standalone set of recommendations that answer a specific clinical question. Each recommendation in a module is separately graded according to quality of supporting evidence and strength of recommendation.

The GWG determines ratings of strength of recommendation using a modified GRADE method. Under this method, recommendations may be rated either "strong" or "weak," reflecting confidence that the desirable effects of the intervention outweigh the undesirable effects, i.e., confidence in the net benefit of the intervention. When benefits clearly outweigh harms, a strong recommendation is appropriate. When benefits are in close balance with harms, a weak statement is appropriate. For clinicians, a strong rating implies that most patients should receive the recommended intervention, and a weak rating implies that different choices will be appropriate for different patients.¹⁶

Statements with strong ratings are phrased "APA recommends," and statements with weak ratings as "APA suggests." If clinical trial evidence and expert opinion are judged to be insufficient to support a "weak" rating, a statement is made that APA affirms no endorsement for or against the intervention. Instead, further research may be recommended.

Some interventions have face validity, but for ethical or practical reasons, no RCTs exist or are ever likely to be conducted.¹⁷ Such interventions may nevertheless be endorsed by a strong recommendation if there is very strong expert opinion that benefits outweigh harms.

Particularly when interventions are supported by low-quality evidence, survey data guide the GWG in determining ratings of strength of recommendation. As a general principle, interventions to be “strongly” recommended must be viewed very favorably by a substantial majority of the Expert Consensus Panel. Such interventions may or may not be supported by high-quality evidence but if strongly endorsed by the Expert Consensus Panel, may nevertheless receive a strong recommendation. (Separately, the evidence supporting the recommendation would be rated as “low quality.”)

Because “weak” suggestions are less directive than recommendations, the interventions they describe require a lesser degree of support from the surveyed experts. Usually, such interventions will be supported by moderate- or low-quality rather than high-quality evidence, but exceptions may occur.

As an aid to operationalize the above, the GWG and SCPG determine a priori guidelines for interpreting the survey results. These guidelines may be customized according to guideline topic. For example, if the GWG is considering how to recommend intervention X, supported by low-quality evidence, the survey may ask the Expert Consensus Panel, “To what extent do you agree that clinicians should typically (i.e., almost always) provide intervention X to their patients?” with possible responses “strongly agree, agree, neutral, disagree, or strongly disagree.” The following may guide how the intervention is recommended on the basis of expert opinion:

Strength of Recommendation	Percentage of experts who respond “strongly agree” or “agree”
Strong	>80%
Weak	80%–50%
No recommendation	<50%

The GWG uses judgment when applying these guidelines, for example, taking into consideration the quality of the survey results, including the survey response rate. The GWG also considers the internal consistency of the survey data, as such inconsistencies may suggest a lack of consensus or confidence about a particular intervention that would indicate a need to downgrade a recommendation. This could occur, for example, when responses to certain survey questions contradict responses to other questions. This is consistent with a general principle of the GRADE method to default to the next lower strength of recommendation when doubt or dispute exists.

The GWG reaches consensus on the wording and rating of each recommendation or suggestion using a modified Delphi method, i.e., through iterative blind voting. If the GWG cannot reach consensus about how to rate a recommendation, the rating must be downgraded, and a minority opinion may be described in the discussion section.

Survey data are included and reviewed in the discussion sections, allowing readers to judge for themselves the credibility of a rating based on their own assessment of the data and the methodology

used to obtain it. Analysis in the discussion may also make readers aware of potentially interesting findings such as differences in the opinion of expert clinicians compared to expert researchers or differences between individuals according to demographic or practice pattern characteristics.

Step 7: The draft guideline modules are reviewed.

The draft guideline modules are made available for review by advisors, the Expert Consensus Panel, all APA components, the APA Assembly and Board of Trustees, the APA general membership, the general public, and stakeholder and allied organizations including other professional associations and organizations representing patients and families.

Step 8: The GWG finalizes the guideline modules.

The GWG reviews comments by stakeholders and others and considers revisions. Revisions to the wording or rating of a recommendation require a new consensus of the GWG using modified Delphi method. Such revisions must be consistent with the survey data obtained, as described in step 6. Each recommendation, including its rating, must achieve consensus of the GWG before a module can be moved forward for approval.

Step 9: The Steering Committee submits finalized guideline modules for approval to the APA Assembly and Board of Trustees.

After guideline modules are finalized by the GWG, they are reviewed by the SCPG including Assembly liaisons. The main purpose of this step is to provide a final check to ensure that policies and procedures for the guideline development process have been followed and that recommendations are unlikely to be misinterpreted or misused by the field. Requests from the SCPG for revision to the wording or rating of a recommendation must go back to the GWG for a new consensus determination using the Delphi process. Such revisions must be consistent with the survey data obtained, as described in step 6.

Revisions to a discussion section may be handled informally. Such revisions could include adding discussion of the rationale for the rating of a recommendation, adding detail about supporting evidence, describing a minority opinion, adding commentary about how a recommendation might be implemented, or deleting commentary that might be misleading or misinterpreted. During this review step, the SCPG and the GWG also identify recommendations appropriate for development as performance measures and highlight this in discussion sections. Recommendations not appropriate for performance measures, e.g., because of implementation barriers identified by the Expert Consensus Panel, may also be highlighted.

After revisions are completed, the SCPG votes to approve submission of the guideline modules to the APA Assembly and Board of Trustees. The Assembly liaisons on the SCPG may facilitate Assembly approval, e.g., by reporting to the Assembly that the development process has been followed.

Step 10: The APA Assembly and Board of Trustees approve guideline modules for publication.

The APA Assembly and Board of Trustees review and approve guideline modules for publication under the imprimatur of APA. As in step 9, if either group requests a revision to any recommendation, the

proposed revision must go back to the GWG for a new consensus determination using the Delphi method. Such revisions must be consistent with the survey data obtained, as described in step 6.

The approved guideline modules are disseminated in a variety of formats, including online and in print.

Review and Revision Process

After publication, the SRG continues to search newly published literature and review relevant studies. On an ongoing basis, the SRG considers if revisions are needed to ratings of quality of evidence in published guidelines.

If the SRG revises a rating, the GWG considers if this should change the wording or rating of a published recommendation. The GWG also considers if expert opinion may have changed, e.g., because of changing practice patterns, potentially affecting the rating of a recommendation.

Revisions to the wording or rating of a recommendation require re-doing steps 6 through 10 of the development process. Approval may be expedited. Revisions to a discussion section require re-doing steps 8–10 only.

Guideline modules remain published and are considered “current” for as long as the SRG and the GWG continue to agree that new evidence has not changed the recommendations or ratings. On at least an annual basis, the online versions of the guideline modules are updated with approved revisions. Each module is separately dated to indicate when it was last reviewed and approved.

If resources allow, clinical implementation of the recommendations is evaluated, including clinicians’ adherence to the recommendations, barriers to implementation, and patient outcomes. APA’s Practice Research Network may be used. This step is funded separately from development, e.g., by grants. Findings feed into guideline revisions.

¹ Institute of Medicine. (2011). *Clinical Practice Guidelines We Can Trust*. Washington, DC: National Academies Press.

² American Medical Association. (2009). *Physician Consortium for Performance Improvement (PCPI) position statement: The evidence base required for measures development*. Chicago: Author. <http://www.ama-assn.org/ama1/pub/upload/mm/370/pcpi-evidence-based-statement.pdf>.

³ American Medical Association Board of Trustees. (In development). *Ethical Considerations in the Development of Medical Practice Guidelines*. Chicago: Author.

⁴ Council of Medical Specialty Societies. (In development). *Principles for the Development of Trustworthy Specialty Society Guidelines*. Chicago: Author.

⁵ Banks DE, Shi R, McLarty J, Cowl CT, Dorsett S, Tarlo SM, Daroowalla F, Balmes J, Baumann M. American College of Chest Physicians consensus statement on the respiratory health effects of asbestos. *Chest* 2009; 135; 1619-1627.

⁶ American Society of Anesthesiology. Practice guidelines for chronic pain management: An updated report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology* 2010; 112:810-33.

⁷ American Psychiatric Association. (2006). "Appendix: Practice Guideline Development Process." Arlington, VA: Author. <http://psychiatryonline.org/content.aspx?bookid=28§ionid=1674966#58558>

⁸ Institute of Medicine. (1990). *Clinical Practice Guidelines: Directions for a New Program*. Washington, DC: National Academies Press.

⁹ Institute of Medicine. (1992). *Guidelines for Clinical Practice: From Development to Use*. Washington, DC: National Academies Press.

¹⁰ American Medical Association. (1990). *Attributes to Guide the Development and Evaluation of Practice Parameters/Guidelines*. Chicago: Author.

¹¹ The GRADE method is described at <http://www.gradeworkinggroup.org>.

¹² Council of Medical Specialty Societies. *Code for Interactions With Companies*. April 2010. Chicago, IL: Author. Available at <http://www.cmss.org/codeforinteractions.aspx>.

¹³ For a description of "snowball" sampling, see Heckathorn DD. Respondent-driven sampling: a new approach to the study of hidden populations. *Social Problems*. 1997; 44:174–99. For an example of a "snowball" process used to identify experts for a consensus report, see Hogan et al. Development of geriatric competencies for emergency medicine residents using an expert consensus process. *Acad Emerg Med* 2010; 17: 316-324.

¹⁴ Agency for Healthcare Research and Quality. (2011). *AHRQ Effective Health Care Program Stakeholder Guide* (AHRQ Publication No. 11-EHC069-EF). Rockville, MD: Author. Available at <http://www.ahrq.gov/clinic/epcpartner/stakeholderguide/stakeholder.pdf>.

¹⁵ Balshem H, Helfand M, Schunemann HJ, Oxman AD, Kunz R, Brozek J, Vist GE, Falck-Ytter Y, Meerpohl J, Norris S, Guyatt GH. GRADE guidelines: 3. Rating the quality of evidence. *JCE* 2011; 64(4): 401-406.

¹⁶ Guyatt GH, Oxman AD, Kunz R, Falck-Ytter Y, Vist GE, Liberati A, Schünemann HJ; GRADE Working Group. Rating quality of evidence and strength of recommendations: Going from evidence to recommendations. *BMJ* 2008; 336: 1049–1051.

¹⁷ C.S. Smith & J.P. Pell. Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials. *BMJ* 2003; 327: 1459–1461.