Health Equity Framework for the U.S. Preventive Services Task Force

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Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
5600 Fishers Lane
Rockville, MD 20857
www.ahrq.gov

Project Team:
Jennifer S. Lin, MD, MCR
Elizabeth (Beth) M. Webber, MS
Sarah I. Bean, MPH

Kaiser Permanente Evidence-based Practice Center
The Center for Health Research, Kaiser Permanente Northwest
3800 N Interstate Ave
Portland, OR 97227

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Background

Following the publication of "Addressing Racism in Preventive Services: Methods Report to Support the U.S. Preventive Services Taskforce" (USPSTF),[1,2] the USPSTF prioritized developing a "health equity framework" to guide its pilot work on incorporating health equity, race, and antiracism into its recommendations. While the USPSTF has a longstanding practice of considering the evidence by specific populations and improving the health of all Americans, this health equity framework is needed to consistently approach guideline development for all populations that experience inequities in disease or morbidity and mortality from disease, including but not limited to inequities related to race and ethnicity.

Health equity is the absence of unfair, avoidable, or remediable differences in health and well-being among groups of people.[3] Health equity, in contrast to health equality, goes beyond ensuring equal access to quality care for everyone. Health equity necessitates proportionate universalism (i.e., the resourcing and delivering of universal services at a scale and intensity proportionate to the degree of need) for all to achieve their full potential for health and well-being.[4] For the purposes of this framework and report, health inequity refers to meaningful differences in health (e.g., condition prevalence, morbidity, or mortality from said condition) or health determinants (e.g., social determinants, receipt of clinical preventive services related to a condition) due to plausibly avoidable social, economic, or other disadvantage. Therefore, health inequity, as opposed to health disparities, necessarily implies injustice.

Aims

To develop a health equity framework for incorporating a health equity lens that spans the entirety of the USPSTF recommendation-making process. This equity framework was used to organize a "checklist" of key items that could be considered at each phase of work underlying USPSTF guideline development: a) topic nomination, selection, and prioritization, b) development of the work plan, c) evidence review, d) evidence deliberation, e) development of the recommendation statement, and f) dissemination of recommendation(s).

Methods

We developed an equity framework with an accompanying checklist that could be used at all phases of the recommendation process. The checklist was informed by key guidance, policy, and explanatory frameworks identified in the publication, "Addressing Racism in Preventive Services: Methods Report to Support the USPSTF,"[1] and other relevant guidance related to health equity.[5-11] We started with the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) working group's guidance on addressing health equity[1,12] and mapped their recommendations to the current USPSTF methods articulated in the USPSTF Procedure Manual[13] and major published updates to the USPSTF methods[14-20] that are not yet reflected in the Procedure Manual. We cross-referenced these two key pieces of guidance with other identified guidance and frameworks addressing health equity.[21-25]

We also consulted with current and selected past USPSTF members, staff from the Agency for Healthcare Research and Quality (AHRQ), the Scientific Resource Center (SRC), and the Evidence-based Practice Centers (EPCs), the Dissemination and Implementation (D&I) Work Group lead, the Communications Team, and the editors of the *Journal of the American Medical Association* (*JAMA*). Based on all the gathered information, we developed this health equity framework and checklist. Many items in this checklist are being piloted in a series of health equity topics (**Appendix Figure 1**). Some areas of this framework will need additional methods or process consideration before piloting. Grayed out text in the **Table** denotes areas which should be included in the health equity framework but were not part of this initial work. Additionally, this framework, although meant to be broadly applicable to all populations affected by health inequities, does place an emphasis on racial and ethnic inequities. This emphasis is not to minimize the inequities experienced by other populations but rather is a reflection of the genesis of this framework and the available guidance to date. For these and other reasons, this health equity framework will continue to evolve over time. The current version of this framework reflects revisions made based on feedback from USPSTF Federal and D&I partners.

Implementation of the Health Equity Framework

This health equity framework with checklist items (**Table**) describes an "ideal" USPSTF recommendation process that could be considered for implementation were there no resource limitations (e.g., cost, time, and personnel). What is feasible and essential to implement will need to be determined through further prioritization and pilot testing of the checklist items and proposed methods for adoption. Nevertheless, routinely considering the framework and checklist (even in the absence of formal processes) will contribute to the USPSTF developing a more transparent, consistent, and intentional approach to addressing health equity in its portfolio.

This framework also recognizes that there are methods and processes that need to be developed to better address looking for the presence of inequities, the drivers of inequities, and interventions to reduce inequities around prevention in primary care. This will require some redesign of methods, which we propose can happen incrementally, building on the existing methods and processes of the USPSTF. Many of the processes and methods described below are already part of the USPSTF and EPC procedures. Other considerations in the framework are currently (or can be) conducted as part of the health equity pilot topics. The pilots should inform the value of these proposed methods to the recommendation process, balanced with the resources needed to conduct this additional work. In the **Table**, we note what is already being done, what is (or can be) pilot tested now, and what will need additional methods development before pilot testing. The **Table** also points to items that may be considered a departure from the traditional purview and methods of the USPSTF but are relevant to achieving health equity.

Topic Nomination, Selection, and Prioritization

In 2021, the SRC worked with the Topic Prioritization Work Group (TPWG) to further incorporate health equity into its processes, to highlight topics that have observed differences in condition/disease incidence and/or disease morbidity/mortality across different populations. In November 2021, health equity was added as a criterion for topic nomination, selection, and prioritization. Health equity refers to the absence of meaningful differences in condition prevalence, morbidity, mortality, or receipt of clinical preventive services across populations due to disadvantage.

Nomination

The current public nomination process allows anyone to nominate a new topic. In addition to public nomination, the USPSTF's Federal and D&I partners (key partners) can play a key role in topic nomination. New partners receive an orientation when beginning their engagement. AHRQ discusses their role and important areas of contribution, one of which is to suggest new topics. The D&I partners represent many groups affected by health inequities, including Black, American Indian or Alaska Native, Hispanic/Latino, and Asian and Pacific Islander persons, as well as sexual and gender minority persons. Additionally, some D&I partners (e.g., American College of Physicians [ACP], American College of Obstetricians and Gynecologists [ACOG]) also have health equity experience in developing their own guidance for their professions. Some Federal partners also have significant experience delivering care to populations historically facing health inequities (e.g., Indian Health Service [IHS], Veterans Health Administration [VA]) or developing health policies (e.g., Centers for Disease Control and Prevention [CDC], Centers for Medicare & Medicaid Services [CMS]). A list of partners is provided in **Appendix Box 1**.

The current nomination process can be supplemented with greater engagement and bidirectional conversation with key partners to nominate new topics. Enhanced engagement could include "USPSTF 101" orientation for new partners (or new liaisons) to broaden their understanding of the scope of the USPSTF and how to effectively engage in giving input around health equity. Incorporating continuing education opportunities for key partners over time may also help engage partners in the topic nomination, and other processes. Enhancing their participation should be balanced by considerations to minimize the burden on partners (e.g., how this can be fit into their organizations' existing workflow). Efforts to understand barriers and opportunities to engage D&I partners are currently underway. To better address health equity issues, it is critical to build on existing partnerships and create new partnerships with a diverse spectrum of D&I partners (e.g., representation of persons with disabilities).

Selection and Prioritization

Initial triaging of nominations is based on scope and relevance. Newly added language to the Procedure Manual (Section 2.2. Determination of Scope and Relevance of New Topic Nominations and Topic Selection) specifies "*Public health importance* (i.e., burden of suffering and expected effectiveness of the preventive service to reduce that burden), *including the potential for a Task Force recommendation to*

address racism and health inequities (e.g., by improving preventive care for populations facing health disparities)." The TPWG prioritizes topics approximately three years after their previous publication or upon new nomination. Using information provided in Background documents, the TPWG considers the potential for a USPSTF recommendation to address racism and health inequities (e.g., by improving preventive care for populations facing health disparities).

To ensure a data-driven approach, using a separate health equity search, relevant health equity information is identified and incorporated into the Background document created by the SRC. Relevant health equity information may include: social risk factors (e.g., poverty, access to care) that intersect with race and/or ethnicity (or other population groupings like gender and sexual orientation, persons with disabilities) and affect prevalence and burden of disease; recommendations for specific populations; any inequities in how preventive services are provided, accessed, or received; and disparities in prevalence of disease, morbidity, and mortality. Information on newly identified primary studies published since the last review are described with information on inclusion of specific populations when available, and subgroup analyses by race and/or ethnicity, or other relevant sociodemographic characteristics. Background documents note when equity information was looked for but not identified. Because not all topics are supported by Background documents, a separate effort to audit the portfolio of A, B, and C recommendations to identify which preventive services have differential receipt of the clinical preventive service across disadvantaged populations may be helpful for prioritization and topic refinement (see **Work Plan**).

Currently, after the TPWG reviews the Background document, active topics may move forward for prioritization or be considered for referral to other organizations. Some newly nominated topics may not be mature enough to move forward, despite their relevance, due to lack of an evidence base relevant to primary care. In these cases, there may be an opportunity for the USPSTF to publicly communicate policy or future research considerations in addition to providing the disposition of topic to the nominator. For example, evidence gaps can be included in the Report to Congress, and/or AHRQ can routinely communicate back to certain nominators about the status of their nomination with respect to the available evidence base. Active topics and relevant new topics that are not referred to another organization are sent to USPSTF members and Federal and D&I partners for ranking in an annual prioritization survey, which now includes a health equity criterion.

To better support health equity in clinical preventive services, the USPSTF TPWG could incorporate into its process the appropriateness of the reaffirmation process or scope change on the basis of information on health inequities even for those preventive services which are currently considered standard of care. For example, mature recommendations for which there are significant existing health inequities that can be mitigated through prevention or early detection may not be appropriate to update through the reaffirmation process. For some longstanding A and B recommendations, the USPSTF may choose to revise these recommendations to better address specifically what preventive service works in which populations (i.e., what works best for whom). Although this may seem like a departure from the traditional scope of the USPSTF, some mature topics (e.g., screening for breast cancer, screening for cervical cancer, or screening for colorectal cancer) already address comparative effectiveness.

Other mature recommendations (e.g., screening for hypertensive disorders of pregnancy) that remain active may be better served with a change in scope when the available screening or preventive service is considered standard of care, but considerable morbidity or mortality for specific populations remain. For

example, the recommendation would evolve from "Should we screen for hypertension in pregnancy?" to ask the broader question, "What preventive services should be performed to prevent maternal morbidity and mortality?" In addition to reviewing public comments from the prior maternal health recommendation, key partners (e.g., National Medical Association [NMA], ACOG) may be able to provide input on evolving the topic to redress inequities. There may also be mature D recommendations and longstanding I statements on conditions with significant health inequities. An audit of these topics would be helpful to understand if there is another opportunity to evolve the scope of these topics to better address health inequities.

Work Plan (Including the Research Plan)

The Work Plan is a comprehensive document that is produced during the topic refinement phase. It includes important background matter, a scan of the evidence since the prior recommendation (if applicable), and the Evidence Review's protocol. The Research Plan is an excerpt from the Evidence Review's protocol that is shared publicly prior to conducting the Evidence Review.

In 2012, the USPSTF, with EPC support, began developing explicit methods for addressing effects in specific populations (at that time referred to as "subpopulations"). A Subpopulation Work Group was convened to address how to do more extensive exploration and evaluation of the evidence in specific populations, which focused primarily on grouping by age, sex, race and/or ethnicity, or risk status for a given condition. This work ultimately culminated in changes to the methods and procedures for the Work Plan, Evidence Review, Evidence Deliberation, and Recommendation Statement phases, described in a series of publications and internal documents.[13,14,19,20] This work was formative in developing the considerations for evaluating the evidence in service of health equity.

Section I. Purpose and Background

Developing the background matter for the Work Plan is critical to scoping the Evidence Report in all aspects, and specifically to advance health equity across populations. Section I of the Work Plan template already includes guiding questions for Prevalence and Burden of Disease/Illness to identify evidence on whether specific segments of the U.S. population may be disproportionately affected by a condition or susceptible to variation in the effectiveness of the preventive service. Operational guidance on using targeted literature searches, existing guidelines, existing reviews, as well as national representative data on incidence/prevalence and morbidity/mortality is detailed in a separate paper.[20] In addition, EPCs can also use the Background document prepared by the SRC, if available, along with previous EPC evidence report(s) and recommendation statement(s).

EPCs may also consider using PROGRESS-Plus, a framework for identifying populations warranting particular attention.[6] PROGRESS is an acronym for the eight ways to describe groupings: 1) Place of residence (e.g., rural populations), 2) Race, ethnicity, culture, and language, 3) Occupation, 4) Gender and sex, 5) Religion, 6) Educational level, 7) Socioeconomic status including insurance status, and 8) Social capital or social exclusion. "Plus" refers to personal characteristics or demographics associated with discrimination (e.g., disability), features of relationships (e.g., parents who smoke), and time-dependent relationships (e.g., recently discharged from hospital). This framework can serve as a

checklist to make sure all populations at risk for inequity are considered. When this framework is used, it is important to describe how the disadvantaged population was defined, including what proxies are being used to identify the population.[10] For example, race and/or ethnicity may be used as a proxy risk factor for pigmentation in screening for vitamin D, culture or language in counseling for healthy lifestyle, or more generally as a risk factor for racism explaining differences in health outcomes. Authors should be careful to avoid implying biological determinism when race, ethnicity, and other groupings largely based on social, political, and historical experience are identified as risk markers.

Section I should include a description of differences in incidence or prevalence of the condition and if possible, its risk factors as well as subsequent morbidity/mortality from the condition across specific groups. If known, it may also include the trends for observed disparities, noting if increasing or decreasing over time. This information can serve as the basis for estimating differences in absolute effects of a given preventive service (see **Evidence Review: Chapter 3**). In addition, this section could include mechanisms for observed disparities (i.e., what are the key drivers of observed disparities). Using an explanatory model may help with articulating potential drivers of disparities (see **Work Plan: Section IV**). However, this may not be feasible to do during the Work Plan phase. If mechanisms for observed disparities are not obvious or well described, this may be important to answer as a Contextual Question (CQ) during the review process. Likewise, identifying disparities in access to and receipt of preventive services should be addressed at the Work Plan phase. It may be important to answer implementation considerations to address low or differential receipt of services as a CQ during the review process. Categorizing key drivers of disparities into four groupings may be helpful for the USPSTF to operationalize how it can act on inequities:

1) Upstream determinants that lead to disparities in the condition and disease (this includes structural and social determinants as well as individual social risk factors), which can be described in Risk Factors section, or differences in (etiology or) natural history that lead to disparities in morbidity/mortality, which can be described in Etiology and Natural History section.
2) Determinants (mediators or moderators) of a screening or intervention that lead to disparities in morbidity and mortality, which can be described in Detection/Screening or Intervention/Treatment sections.
3) Determinants affecting access to and receipt of screening and interventions, which can be described in Current Clinical Practice section.
4) Downstream determinants that lead to disparities in morbidity and mortality (e.g., followup of abnormal screening or treatment of a condition), which can be described in Intervention/Treatment or Current Clinical Practice sections.

Section II. Previous Review and USPSTF Recommendation

In the summary of the prior Evidence Review and Recommendation Statement, prior evidence gaps specific to populations experiencing health disparities should be noted. For certain topics, it may also be helpful to review prior USPSTF meeting minutes and summaries of the public comments for the draft Evidence Review and Recommendation Statement, calling out any notable commentary or critique regarding health equity for the topic.

Section III. Scan of the Evidence (Since Previous Recommendation)

Typically, the scan of the evidence since the previous recommendation or for a new topic summarizes evidence from recent existing systematic reviews and targeted searches for randomized, controlled trials (RCTs) for evidence of benefit. For topics with limited RCTs (limited in number or limited applicability to population or interventions), it may be reasonable to search for large well-conducted nonrandomized studies of interventions (NRSIs) (e.g., comparative cohort studies) for evidence of benefit at the Work Plan phase to help determine inclusion criteria. Currently, NRSIs are generally routinely included only for evidence of potential harms. A decision to expand the evidence of benefit to include NRSI evidence at the Work Plan phase should be based on its likely value during Evidence Deliberation considering the available study designs, study design and data quality limitations, as well as the extra resources required to identify and synthesize this evidence (see **Work Plan: Section IV; Evidence Review; and Evidence Deliberation**).

For topics in which there is little accrual of new evidence because the provision of a preventive service is standard of care (e.g., screening for hypertensive disorders of pregnancy), the scan of evidence can address questions regarding delivery/implementation of a preventive service which may be more appropriate for targeting the greater burden of disease observed for specific population groups (e.g., Black and American Indian/Alaska Native pregnant persons) (see **Work Plan: Sections IV and V**).

Section IV. (Update) Review Approach and Section V. Research Plan

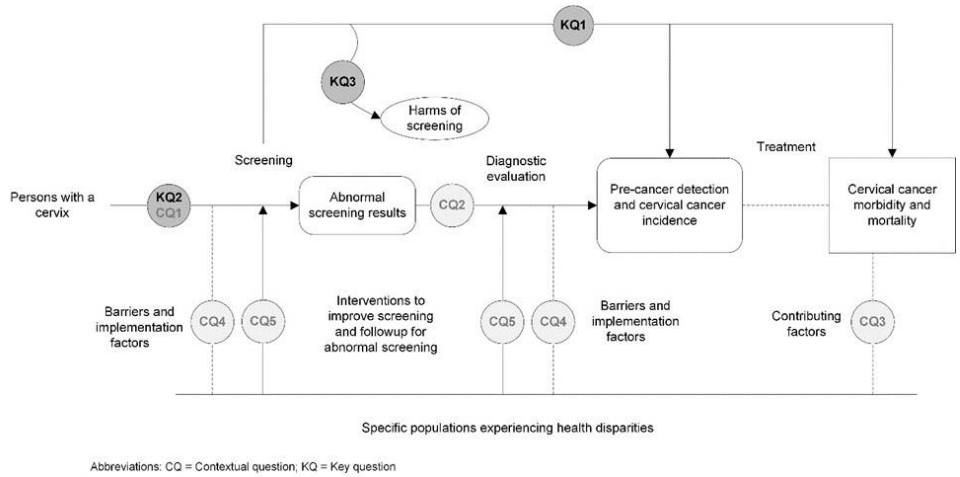
Analytic frameworks and other conceptual models. The Analytic Framework (AF) is a codified approach to visually depict Key Questions (KQs) and helps the USPSTF to establish linkages (chain of evidence) to arrive at a recommendation if there is little to no direct evidence demonstrating the benefit of a preventive service on health outcomes. The AF and other types of frameworks are sometimes collectively referred to as logic models or conceptual models. The AF is not an explanatory framework or causal model, and it does not display CQs or contextual moderators (e.g., geographic, epidemiologic, sociocultural, economic, ethical, legal, or political factors). In contrast to the AF, other logic models allow for the systemic conceptualization of key considerations for guideline development (e.g., scope definition, dealing with complexity, KQs, and other considerations). Given the complexity of factors contributing to observed health disparities and health inequity, it may be helpful to use a different type of conceptual model alongside the AF, to depict preventive services within their broader context. The value of conceptual models for planning systematic reviews in general is articulated elsewhere.[5,10] Specific to health equity, adapting the existing AF or using a different type of conceptual model alongside the AF would allow for the explicit acknowledgement of important contextual moderators.

To date, the AF has limited ability to visually depict important considerations around health equity. Some AFs have annotated key populations of interest. More recently, the health equity pilot on breastfeeding counseling used a footnote to convey consideration of the evidence by specific population and refers readers to a separate section of the Research Plan (see **Work Plan: Section IV, Data analysis or evidence synthesis approach**). It is also possible to visually depict how CQ(s) related to health equity relate to KQs (**Figure 1**). This approach is a compromise in that it can show key contextual moderators, but does not necessarily show the relationship between moderators, the preventive service, and outcomes. A drawback of this approach, however, is that adapting the AF to accommodate CQ(s) related

to health equity departs from longstanding AF conventions and may create confusion between systematically and non-systematically reviewed evidence.

Systems-based logic models may be helpful to present alongside the AF (rather than adapting an AF to accommodate health equity considerations).[5,10] These conceptual models can capture the complexity of interventions and more fully depict their causal pathways (mediators and moderators of intervention) and interactions between intervention and broader systems. A systems-based logic model can be developed during the writing of Section I and may be helpful to articulate and communicate key contextual moderators of interest. **Figure 2** is a template for one such model.[26] More detailed explanatory models on social determinants of health (SDH) or race/racism may be necessary to help understand what the key contextual (and implementation) moderators are, but are likely to be too detailed to be helpful as a visual tool for communicating the scope of the evidence review (**Figure 3a-b**). Understanding when using a systems-based logic model, or other explanatory models, may be helpful and the value added by using such a conceptual model alongside an AF may be best determined through pilot testing.

Figure 1. 2022 Cervical Cancer Screening Work Plan (Not Included in Research Plan)



KQs: 1) What is the comparative effectiveness of different cervical cancer screening strategies (i.e., test, mode of collection, or interval of testing) on precancer detection, cancer incidence, morbidity, or mortality? 2) What is the test accuracy of and adherence to self-collected hrHPV vaginal samples? 3) What are the comparative harms of different cervical cancer screening strategies?
CQs: 1) What is the comparative test accuracy of hrHPV tests used in U.S.-based clinical practice? 2) How can extended genotyping and use of biomarkers for abnormal hrHPV or cytology reduce burden of testing and diagnostic procedures? 3) What are the social risk factors (e.g., race, racism, socioeconomic status, insurance status, or geography) or other risk factors (e.g., history of sexual trauma, smoking, or vaccination status) that contribute to inequities in cervical cancer incidence and health outcomes? 4) What are barriers and implementation considerations (e.g., health system, clinician, or patient) to screening and followup testing? 5) Are there effective interventions or strategies to improve screening rates and followup to abnormal screening results?

Figure 2. Sample System-Based Logic Model Template[26]

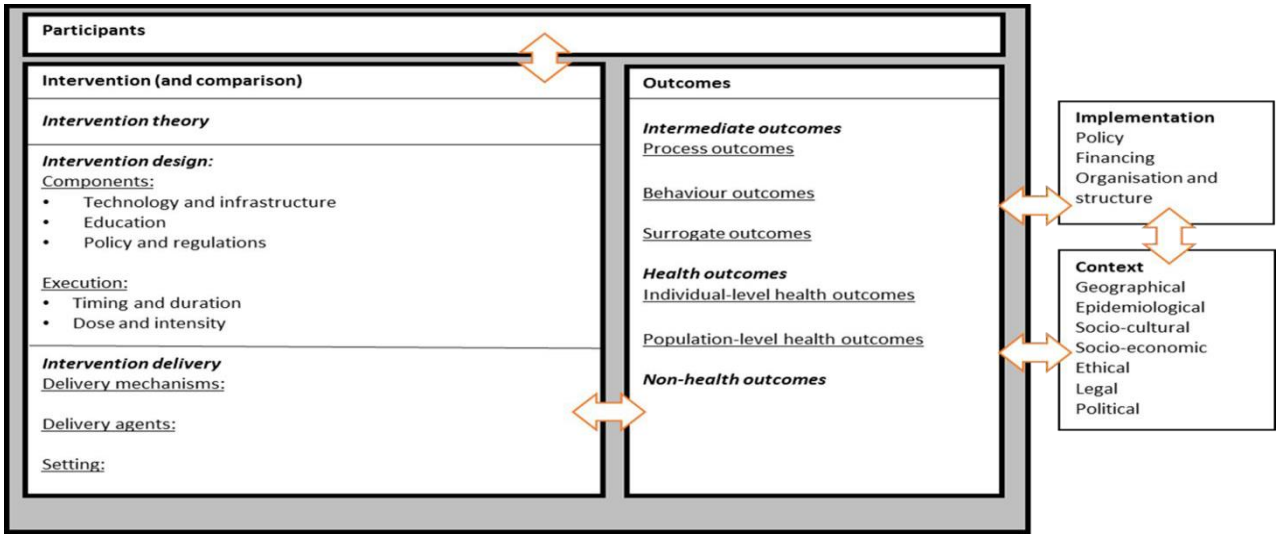


Figure 3a. World Health Organization Conceptual Framework on SDH[27]

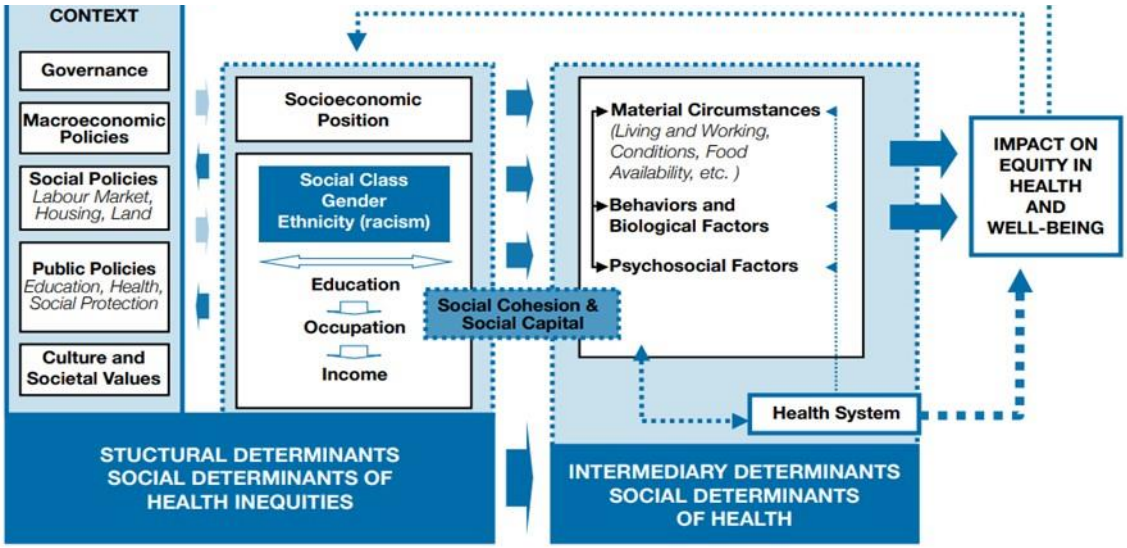
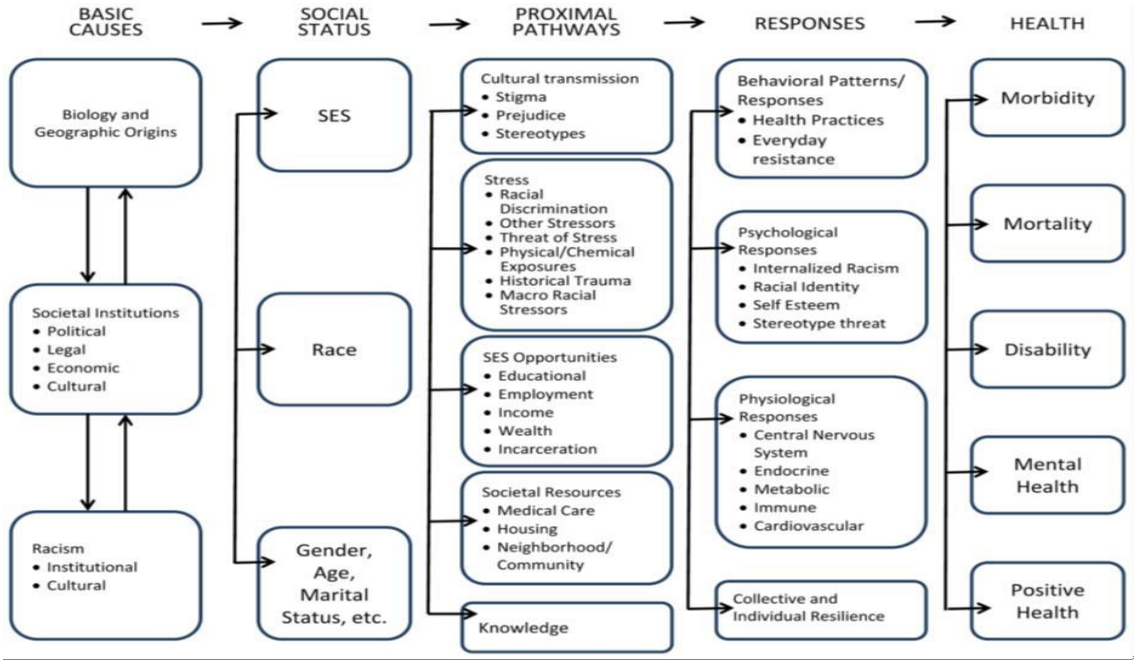


Figure 3b. Williams Framework on Race/Racism on Health[28]



Key questions and contextual questions. KQs traditionally address the evidence on the benefits and harms of a preventive service, and if applicable, the test performance of screening or risk assessment, benefits and harms of treatment, and the association between intermediate and health outcomes. These KQs allow the USPSTF to assess the magnitude and certainty of net benefit for a given preventive service. If evidence allows, the USPSTF may be able to assess the differential magnitude and certainty of net benefit for different a priori specified populations. Over time the USPSTF has adopted the use of "sub-KQs" to communicate that it will look for differences in effects across specific populations. Typically, sub-KQs address the evidence on variation of relative and absolute effects by specific populations, which is primarily a data analysis issue and is detailed in the Data Analysis section. However, the Research Plan (as opposed to the full Work Plan), posted for public comment, does not contain a Data Analysis section and the intent of the review to investigate effect heterogeneity across different populations (or different interventions) is apparent only in the wording of sub-KQs. Addition of a new and separate section in the Research Plan may provide more transparent and focused communication as to how the evidence will be synthesized with respect to heterogeneity of populations (as well as intervention complexity) and other nuances of data synthesis with respect to health equity. These nuances can include interpretation of differential effect in populations defined by biology (e.g., persons with high-risk human papillomavirus [hrHPV] vaccination) as well as populations defined by social risk (e.g., race and/or ethnicity), and generalizability of findings based on applicability of populations in included studies. The addition of a separate section would also allow for communication of other commonly received questions during the public comment period on data synthesis.

Often, other clinically important questions inform the Recommendation Statement but do not contribute to the determination of the letter grade (magnitude and certainty) of the recommendation itself. These questions are traditionally answered without use of systematic review methods in the form of CQs. CQs sometimes play a critical role in informing the recommendation, and allow the USPSTF to understand how the patient, community, clinical, and service context influences the certainty and net benefit of a preventive service.[18] Currently the USPSTF has a number of topics piloting health equity–related CQs (**Appendix Figure 1**). Equity-relevant CQs may explore:

1) Observed disparities in outcomes and mechanisms leading to these disparities related to a preventive service, particularly if the mechanisms are complex and not easily addressed in the Work Plan phase
2) Resources and feasibility considerations for implementation of a preventive service if intervention is complex, not widely available, or resource intensive (or resources not equitably distributed across populations/settings) (for A, B, and C recommendations)
3) The impact of patient values of outcomes on net benefit, particularly if the overall net benefit is small (for A, B, and C recommendations)
4) Acceptability (patient preferences) and receipt of a preventive service, particularly if there are multiple options for a preventive service, if the intervention is more intrusive, or if there is suboptimal receipt of an intervention (for A, B, and C recommendations)
5) Interventions to increase the receipt of a preventive service, if there is suboptimal receipt of an intervention (for A, B, and C recommendations)

CQs may be answered using existing synthesized evidence and/or targeted literature searches looking for best evidence (e.g., large, nationally representative data). For health equity–focused CQs, existing synthesized evidence or obvious sources of best evidence may not be available and therefore may require more resources to answer than other types of CQs. Answering these CQs may require dedicated literature searches and evaluating qualitative and mixed-methods studies, and may require looking at an intersection of clinical, public health, and socioecological data. For specific topics, a CQ reviewing existing decision analyses that evaluate the differential effect of a preventive service across populations may also be helpful. The feasibility of routinely including such CQs, given the existing resources, will be determined by the ongoing pilots.

In the case of mature A and B recommendations for which a preventive service is standard of care, but significant clinical questions remain around reducing health disparities or how best to tailor or implement preventive services for those populations most at risk for negative health outcomes, EPCs could consider changing traditional KQs around effectiveness and harms of a preventive service to include KQs on implementation considerations. For example, questions might include what works best for whom, how best to deliver a preventive service and care immediately downstream to the preventive service (see **Topic Nomination, Selection, and Prioritization: Selection and Prioritization**). The evolution of mature topics to focus on comparative effectiveness and implementation of preventive services is an area for further attention and work.

Inclusion criteria. Inclusion criteria for KQs are generally described in the Work Plan's Scope of Review (Section IV) and Proposed Research Approach (Section V). Specific populations identified in Section I of the Work Plan can be listed under population, as well as the data analysis section. Inclusion criteria related to the intervention should be inclusive of potential differences in the delivery of interventions

across specific populations (e.g., intervention tailoring). Included outcomes may need to be expanded to include societal, legal, ethical, decision-making, and non-disease–oriented outcomes (e.g., social needs outcomes), as well as unintended consequences that are meaningful to populations experiencing the greatest burden of disease. While there have been select topics (counseling for motor vehicle occupant restraints, screening for cognitive impairment, and preventive services for food insecurity) that have included such outcomes, the value of considering these types of outcomes more routinely is one area for future development. Identifying other outcomes of importance to mitigate inequities may necessitate soliciting public or patient input (particularly from groups experiencing inequities) to help identify and rank these outcomes.

Inclusion of NRSIs for the effectiveness of a preventive service could be considered even when robust RCT evidence exists, as RCTs often do not include adequate representation of populations experiencing health disparities. Given the limitations of NRSIs for determining effectiveness (or comparative effectiveness), the rationale for inclusion of NRSIs should be articulated (e.g., RCTs include narrowly defined or homogenous populations and cannot extrapolate to other populations/settings, strengths of particular NRSI designs). NRSIs with contemporaneous controls to determine effectiveness or comparative effectiveness have been included in systematic reviews and should be prioritized over NRSIs that do not compare groups enrolled during the same time frame. Inclusion of NRSIs with historical comparators, pre-post study designs, or other study designs are generally at high risk of bias and therefore should only be included as an exception with a well-defined rationale for inclusion. In general, the value of including NRSIs must be weighed against the potential for a greater risk of biased or incorrect effect estimates. According to the USPSTF methods any study, regardless of study design, at very high risk of bias (poor quality) should be excluded.

Typically, included evidence is limited to those studies conducted in countries most applicable to the United States based on economic development indices (i.e., ranked "Very High" on the Human Development Index). In select instances, English-language publications of studies conducted in other countries not meeting these criteria (e.g., Mexico, Brazil, China, and low- to middle-income countries) can be included if there are no significant concerns about applicability of the population(s), intervention(s), and comparators (e.g., usual care) in these studies. However, most often, studies conducted in these countries are not considered generalizable to U.S. practice.

Approach to evidence synthesis. In the Work Plan, the approach to evidence syntheses with respect to health equity should be described in Data Analysis in Section IV. Additionally, an analogous section on the approach to evidence synthesis with respect to clinical heterogeneity and health equity can be included in Section V: Research Plan (see **Work Plan: Section V, Key questions and contextual questions**). Currently, the title of this newly added section is "Approach to Assessing Health Equity and Variation in Evidence Across Populations." Health equity–specific language should address assessing the representativeness of the included populations, addressing heterogeneity of effects across different populations, interventions, settings, and study designs. To date, several Research Plans (e.g., breastfeeding counseling) have piloted this section.

Feedback on Draft Work Plan and Research Plan

Typically, EPCs may choose to have the draft Work Plan of new topics and selected updates reviewed by outside experts prior to public posting of the draft Research Plan. EPCs should also solicit input from reviewers with expertise in health disparities for topics with a (change in scope to) focus on health equity. Details of the expert reviewer(s) should be included in "Use of Outside Experts" in Section IV. Input on the draft Research Plan during the public comment period should include diverse populations, with attention to those experiencing inequities. Inviting feedback from key partners (see **Topic Nomination, Selection, and Prioritization**) is part of the existing process, although currently only about 50 percent of key partners respond to this request, and the partners who respond tend to be the same group of organizations. To improve the response rate and quality of feedback on equity-specific issues, guiding questions specific to health equity may be needed, such as "Are there other important questions that should be addressed to help mitigate health disparities?" and "Are there important populations that may be [inadvertently] excluded from the review that should be included?" Additionally, it may be helpful for key partners to see other sections of the draft Work Plan, when responding to the draft Research Plan.

Evidence Review

The Evidence Review is conducted solely by the EPCs after the Work Plan is developed with input from the USPSTF. The review process adheres to methods set forth by the USPSTF as well as the EPC Program. As mentioned before, this framework guidance builds on the work conducted by the Subpopulation Work Group. The EPC Program does not currently have explicit guidance for addressing health equity in reviews.

Chapter 1. Introduction

The introduction of the report follows the same structure as Section I of the Work Plan (see **Work Plan: Section I**). Typically, the background information is updated during the writing of the review itself with additional detail added when needed (e.g., from additional information identified during the review or expert review process).

The Evidence Review should use inclusive terminology when referring to specific populations. While inclusive terminology is evolving, the USPSTF has a living guidance document with respect to inclusive language for diversity, equity, and inclusion (**Appendix. Interim Language Guidance**). General principles focus on:

1) Using person-centered language (e.g., "people with obesity" rather than "obese people")
2) Using inclusive terminology (e.g., "pregnant persons" rather than "pregnant women")
3) Using specific terms when possible (e.g., "Black and Indigenous populations" rather than "diverse populations")
4) Using the term used by the study; however, when terms are interchangeable, use the more inclusive term

5) Capitalizing proper nouns for racial and ethnic groups (e.g., "Black Americans" rather than "black Americans")
6) Avoiding terms that subjugate the specific population being referred to (e.g., "non-White persons" or "subpopulations")

Chapter 2. Methods

The Methods section of the report follows a similar structure as Section IV: (Update) Review Approach of the Work Plan (see **Work Plan: Section IV**). If inclusive language or living guidance for inclusive language is not noted in the USPSTF Procedure Manual, it may be important to include text in the Methods section of the review that explicitly states the inclusive terminology.

Key questions and analytic framework. The CQs are not routinely described in the Methods section. Given that the CQs address important clinical questions about health equity and other considerations that frame the understanding of net benefit and implementation of the preventive services, these should be listed in the Methods as CQs that were addressed as part of the report. This section can be relabeled "Analytic Framework, Key Questions, and Contextual Questions," which is similar to the section in the Work Plan and Research Plan.

Data sources and searches. Descriptions of data sources and searches are limited to systematically reviewed questions (i.e., KQs). Since CQs should be listed in the Methods section, additional text, even if brief, should be included to generally describe the data sources, targeted searches, or general methods used to identify the "best evidence" to answer these questions. It would be important to note that systematic review methods were not used, and to briefly describe what methods or approaches were used (e.g., use of existing systematic reviews, use of expert identified sources, use of national reports or white papers, or use of grey literature).[5] Answering health equity–related CQs may require additional targeted searches. How to identify the best evidence as well as the resources needed to answer these questions is being evaluated in the ongoing health equity pilots. Further guidance on how best to identify and describe methods for identification of best evidence to answer equity-related CQs will be informed by these pilots.

Quality assessment and data abstraction. Critical appraisal of included studies for KQs should follow USPSTF and EPC guidance. In addition, the credibility assessment of subgroup analyses should be described in the Methods. Credibility assessment should address: 1) the likelihood that positive subgroup effects are spurious; 2) the potential for confounding in subgroup analysis by another study variable; and 3) whether a study was powered to detect differences across populations. Data abstraction should include population characteristics that allow for judgement of applicability of the study findings as well as details to assess for credibility of subgroup analyses, which could include the presence of interaction testing or whether a trial's subgroup analyses were prespecified.

Data synthesis and analysis. Data synthesis across populations, and if applicable, analyses stratified by specific populations or settings, should be prespecified and described in the Methods along with the rationale for stratification of results. For example, are there differences in baseline risk of condition or outcome due to heritable risk, biological differences not due to heritable risk, or differences in social risk affecting access and receipt of care? This rationale also underpins the decision on whether findings in the general population apply to a specific population or whether findings from one specific population apply

to another population. For stratified or subgroup analyses, direct evidence from within-study comparisons should be emphasized over across-study comparisons, which can be confounded by trial-level differences in populations and their risk factors. In general, stratified analyses and meta-regression, which provide information on how treatment effect differs between groups of studies, and not by groups within the studies, should not be used to address racial and ethnic subgroup differences. When synthesizing trial-reported subgroup analyses, the total number of trials reporting the subgroup of interest out of the total number of included studies should be reported to illustrate the representativeness of available subgroup data. If available, individual patient-data (IPD) meta-analyses should be used to investigate differential relative and absolute differences in specific populations, as this design allows for more robust control of confounders. In most bodies of evidence, the use of trial-level analyses to investigate differential relative or absolute effects is limited because of notable trial-level heterogeneity in population, intervention, or temporal factors. Accordingly, the use of meta-regression or visual inspection of plots as methods for investigating potential effect modification is usually of limited value.

Expert review and public comment. After expert and Federal partner review, and/or public comment period, a high-level summary of comments related to health equity considerations, and how these did or did not result in changes to the report, should be described.

Chapter 3. Results for Risk Assessment Performance, Screening Test Performance, Effectiveness, and Harms

Results are typically written up separately for each KQ, with a high-level summary of findings preceding more detailed results. If applicable, important findings or absence of findings by specific populations can be noted in the Overview/Summary of Results section.

Detailed results should include a Description of Included Studies section with supporting tables that include proportion of persons (e.g., % Black persons) by prespecified populations of interest. Often, studies do not report the proportion of persons by race and/or ethnicity but will instead report the proportion of persons who are White. When studies do not report by important prespecified populations, report "not reported (NR)" instead of omitting this participant characteristic in the supporting tables. Text summarizing general findings across studies (e.g., "studies rarely reported participant race and/or ethnicity"; "only two studies included Black or Hispanic participants") should be included to help with judgment regarding applicability of findings across a diverse population.

The Description of Included Studies incorporates an analysis of risk of bias (i.e., internal validity) and applicability (i.e., external validity).[8] Critical appraisal of NRSIs using routine clinical practice data, as opposed to data collected primarily for research purposes, ideally, should comment on the data quality in addition to risk of bias using a study design–specific tool (e.g., ROBINS-I). Separate guidance for the USPSTF has been developed to describe the limitations of race-aware risk prediction models.[29] While credibility assessment of subgroup analyses (see **Evidence Review: Chapter 2**) can be described in this section, in some instances, it may be preferable to discuss the credibility assessment of specific subgroup analyses more proximal to the reporting of outcomes, in the Detailed Results section. In some instances, it may be appropriate to apply a threshold to the credibility assessment, reporting only subgroup results that meet an a priori defined threshold. Description of applicability, while subjective, should include which populations are or are not represented in included studies, and why this may or may not affect the

generalizability of results to specific populations based on the rationale for calling out specific populations (see **Evidence Review: Chapter 2, Data synthesis and analysis**). Consider noting if the concern for applicability is about differences in effect modification (i.e., a population may respond differently to an intervention resulting in a different relative effect), or if it is about differences in risk of outcome (i.e., a population may have a greater benefit or harm because of greater underlying risk resulting in a different absolute effect).

Detailed results by outcome can be reported for studies across a range of populations or settings, and, when possible, should also be reported by specific populations. When there are significant observed health disparities across populations, a separate section with sub-header should be devoted to discussing KQ findings by specific populations (rather than by individual outcome). Even when results are limited or non-existent, this section can state that "no or limited studies are available." When there are multiple studies that might inform effects in a specific population, it is important to describe the consistency of findings across studies. Results by outcomes should include both relative and absolute effects by specific population. If possible, the clinical significance of differences in effects should be noted (this can also be done in the Discussion section, if preferable). The comparator or reference group should always be specified (e.g., whole population, White population), as this can vary across studies. Using the White population may not be the appropriate referent population. When drawing conclusions from subgroup analyses, a discussion of the credibility and precision of their findings should be noted in the results by outcome or separately when discussing risk of bias of included studies in the Description of Included Studies section. Specifically, the credibility assessment should include: 1) the likelihood of spurious findings (e.g., a priori, interaction testing, or limited number of subgroup analyses); 2) the likelihood of confounding (e.g., arms comparable at baseline for subgroup of interest, controlling for confounders); and 3) the likelihood of inadequate power. Whether or not results for specific populations are from separate studies or subgroup analyses, an analysis of the likelihood of confounding is critical (i.e., are differences plausible). Guidance for analysis of confounding is detailed elsewhere.[20]

Even when heterogeneity is limited across studies and known measurable confounders are accounted for, interventions may appear less or more effective in certain populations for reasons other than a difference in true effectiveness or harm of a preventive service. For example, a weight management counseling intervention may be less effective in Hispanic populations compared to White populations because it is not culturally tailored, which is different than concluding weight management counseling is less effective in Hispanic compared to White populations. Caution should be taken when analyzing results from any study using routine clinical practice data, as often biases due to structural causes (e.g., structural racism) are encoded into the data. In general, clinical practice data are more susceptible to data quality concerns than data collected for research purposes, although prospectively collected data (RCT or NRSI) for research is not exempt from these issues. For example, screening colonoscopy may appear to be less effective in Black adults compared to White adults in NRSIs; however, Black adults are more likely to receive lower-quality colonoscopy in clinical practice.[30] In addition, populations with less access to and contact with the healthcare system are more likely to have missing data in NRSIs relying on routine clinical practice data. Results should always be stratified by study design with consideration of stratification of results by study risk of bias (i.e., types of bias, quality). If well-conducted IPD meta-analyses present results for specific populations, these should be prioritized over pooled results in the review.

Findings for CQs have been reported in both the Results and Discussion sections. *JAMA* prefers presentation of CQ findings in the Results section because new data (i.e., not discussed in Results) cannot be added to the Discussion in the accompanying journal publication. Regardless of where in the report the findings from CQs are written up, they should be provided their own section with a sub-header, and the location of the section should be consistent across reports. Health equity pilots should describe CQ findings under Results with a sub-header of "CQ Findings." A high-level summary of these findings can be included in the Introduction (e.g., mechanism of health inequities) and the Discussion, in a dedicated Health Equity section (see **Evidence Review: Chapter 4**).

Chapter 4. Discussion

Summary of evidence. A high-level summary of the evidence is provided at the beginning of the Discussion and references the Summary of Evidence (SOE) Table. When appropriate, the SOE table can include a separate row for specific populations, should the magnitude or certainty of the evidence vary by population. If the EPC determines that insufficient evidence exists for specific populations, separate rows by population are not needed. Instead, any limitations by population can be detailed in the Body of Evidence Limitations column, and issues around the representativeness of included populations and generalizability of findings can be detailed in the Applicability column. However, in general, evidence can, and should, be extrapolated to populations experiencing health disparities, unless there are compelling reasons why there would be differences (e.g., biology/physiology, sociocultural influences) (see **Evidence Deliberation: Deliberation of Net Benefit**). For topics with sufficient evidence likely resulting in an A, B, or C recommendation, the Discussion section can also describe outcomes tables created to illustrate differences in absolute effects by populations with different incidence or prevalence of the condition and/or health outcomes from the condition. (Details about outcomes tables are in Appendix VIII of the USPSTF Procedure Manual).[13] If outcomes tables are used to illustrate differences in absolute effects across populations, assumptions and data sources used to estimate the epidemiology of condition and condition outcomes should be transparent. Other metrics to inform the relative or absolute impact on different populations should be investigated. One metric proposed by the Institute for Clinical and Economic Review is the "health improvement distribution index."[11] This index is calculated as the prevalence in a specific population divided by the prevalence in the whole population. Ideally, this summary section should also include the clinical significance of difference of effects across populations and when possible, how the review findings compare to findings from other relevant existing reviews or IPD meta-analyses that were not included in the review. In certain instances, these outcomes tables may support a different letter grade by population, should the magnitude (or certainty) of net benefit differ by population.

Health equity. Topics with significant health disparities may benefit from a dedicated Health Equity section in the Discussion. This section would provide a summary of 1) the information on health disparities (and their causes) from the Introduction and Results sections and, if applicable, the outcomes tables (i.e., which populations are at greatest risk, are there relative and/or absolute difference in benefits or harms of the preventive service across populations), 2) a high-level summary of the health equity–related CQ(s) findings, including, but not limited to, important considerations that should be made when implementing the preventive service to ensure that inequities are addressed and the difference in health outcomes between populations are reduced. In essence, this section should provide all the necessary information for the evidence deliberation in specific populations by the USPSTF (see **Evidence**

Deliberation: Deliberation of Net Benefit).

Limitations and future research needs. The limitations of the included body of evidence for KQs by specific populations should be detailed along with future research needs derived from KQs when available evidence cannot be confidently applied to specific populations. In addition, important evidence gaps with implications for research, practice, or policy related to equity from CQs can be articulated in this section (e.g., related to understanding underlying mechanisms for observed health disparities, implementation considerations for preventive service and subsequent care).[8] See **Evidence Deliberation: Research and practice gaps**.

Feedback on Draft Evidence Review

When appropriate, expert reviewer(s) with a health equity lens should be included to review the draft Evidence Report. It may also be helpful for AHRQ to identify specific liaisons for each Federal partner with health equity expertise. The expert reviewer form can include tailored requests for reviewers with specific expertise and/or include guiding questions to elicit more meaningful feedback (see **Work Plan: Feedback on draft Work Plan and Research Plan**).

Evidence Deliberation

In general, the evidence deliberation should ultimately inform if the USPSTF can make: 1) a general recommendation that can be applied across a broad range of populations with greater confidence that the preventive service is applicable to those disproportionately affected, or if the evidence does not lend itself to greater confidence, then also articulate important research gaps related to health equity; 2) a general recommendation that can be accompanied with implementation considerations for specific populations, to mitigate observed inequities; or 3) a separate recommendation for a specific population when there is evidence of a meaningfully different net benefit.

Deliberation of Net Benefit

The USPSTF's deliberation of the evidence formally begins during premeeting calls with the Topic Leads. This premeeting deliberation primarily focuses on assessing the magnitude and certainty of the benefits and harms of the preventive service (i.e., KQs) and not the contextual issues that may inform clinical considerations or implementation (i.e., CQs). Therefore, the topic leads' discussion should, at a minimum, address: 1) which population(s) are of interest for the recommendation; 2) what is the magnitude and certainty of benefit and harm in these populations(s); and 3) if there is insufficient or low certainty in specific population(s), can the existing evidence be extrapolated to other population(s) of interest, and/or be used for bounding the benefit or harm in other population(s) of interest. Using the GRADE Evidence to Decision (EtD) Framework's health equity questions may help organize the evidence deliberation.[31] The first three guiding questions should be answered before the meeting by the Topic Leads.

GRADE Evidence to Decision Framework's health equity questions[31]

1. Are there groups or settings that might be disadvantaged in relation to the problem or intervention (option) of interest?
2. Are there plausible reasons for anticipating differences in the relative effectiveness of the intervention (option) for disadvantaged groups or settings?
3. Are there different baseline conditions across groups or settings that affect the absolute effectiveness of the intervention (option) or the importance of the problem for disadvantaged groups or settings?
4. Are there important considerations that people implementing the intervention (option) should consider in order to ensure that inequities are reduced, if possible, and that they are not increased?

The first three guiding questions help to answer if there are populations that might be disadvantaged in relation to the preventive service; and if so, are there differences in benefits or harms due to variable responsiveness (relative effects) and/or differences in baseline risk (absolute effects) to the preventive service? The latter question should be applied to harms and benefits (i.e., are there differences in harm due to different relative and/or absolute effects?). These questions should be addressed in the Evidence Review's Introduction, Results, and Discussion sections, and may be summarized in a separate Health Equity section in the Discussion (see **Evidence Review: Chapter 4**). It may be helpful to pilot test additional rows in the Evidence Grid for benefits and harms addressing "Are there differences by specific population? If so, what is the evidence (convincing, adequate, or inadequate) and magnitude (substantial, moderate, small, or zero) of benefits or harms?"

Applicability. If there are known health disparities across population(s) in relation to the preventive service, the USPSTF should first assess whether the included evidence in the review is applicable to these specific populations. First, does the included evidence represent diverse populations (i.e., inclusive of these specific populations)? If not, can the relative effects from available evidence be extrapolated to specific populations of interest? The default assumption should be that the evidence is applicable unless there are compelling reasons to question broad applicability (e.g., differences due to biology/physiology). Other reasons such as sociocultural influences or access, and other healthcare delivery–related issues impacting the effectiveness or harms of a preventive service, are also important to consider and may inform research gaps and implementation considerations for specific populations. However, these are generally not appropriate reasons to question applicability of evidence (thus excluding specific populations from the recommendation). Further work is needed to ensure consistency and transparency of the judgement of extrapolation across populations and settings.

Relative effects. If there are observed differences in the relative effectiveness and harms of a preventive service, the USPSTF should assess if there are plausible reasons for effect modification (e.g., why would a screening test have different test performance in different populations? Why would a medication have greater harms in different populations?) or if differences in relative effects are spurious or due to confounding factors. In particular, NRSIs and studies at higher risk of bias should be considered in light of their limitations (see **Evidence Review: Chapter 3**). Even in RCTs at low risk of bias, plausible reasons for effect modification should be considered, as true differences in relative effects of a given preventive service are uncommon and, in general, true differences in relative effects are rarely the driver of observed health disparities. For counseling interventions, differences in relative effects across

populations may reflect limitations of the counseling intervention itself (e.g., non-culturally tailored) rather than counseling interventions, in general, being a less effective in specific populations.

Absolute effects. If there are clinically meaningful differences in absolute effects of benefits or harms that would change the overall magnitude of net benefit for specific populations, this can result in a different letter grade recommendation. Evidence to support (or refute) differences in absolute effects across populations may be directly from included studies and/or estimated from extrapolating relative effects from included evidence to other populations based on their baseline risk of outcomes. In the former scenario, this may include NRSIs without significant risk of bias. In the latter scenario, formal decision modeling (commissioned or existing), outcomes tables (informal modeling), or other metrics (e.g., health improvement distribution index) can be used to illustrate differences in absolute effects across populations.

When noting differences in relative and absolute effects, the USPSTF should be explicit about its referent group (e.g., whole population, White population), and avoid automatic benchmarking against the White population.

NRSIs using routine clinical practice data may be helpful to inform the absolute and relative effects in populations underrepresented in research and who experience health disparities. However, the plausibility of findings and data limitations should be strongly considered when drawing conclusions from these studies (see **Evidence Review: Chapter 3**). While NRSI data have been included in evidence reviews to support prior recommendations, typically these studies have not been used to support different letter grade recommendations across different populations.

> "Sometimes evidence supports a difference in the net benefit of a preventive service for a particular segment of the population, but the quality or volume of the direct evidence is not sufficiently robust to formulate a separate recommendation. For example, a specific population may be studied in randomized, controlled trials, but the highest evidentiary standard is lacking (for example, subgroup hypotheses were not specified a priori, the trial did not have sufficient power to find an effect in the subgroup, or trial results were not analyzed for statistical heterogeneity among subgroups). In this case, the USPSTF may call attention to a clearly identifiable group for whom the net benefit may differ from that of the average population, even if a separate recommendation is not issued." (Bibbins-Domingo et al.)[14]

If studies at higher risk of bias, regardless of study design, inform effectiveness or harms of a preventive service in specific populations experiencing disparities, the USPSTF should assess if the findings of these studies are concordant or discordant with studies at lower risk of bias in more general populations. If findings are discordant, are there compelling reasons for these differences (see **Evidence Deliberation: Applicability**)? Discordance may result in downgrading certainty and/or articulating future research needs to fill important evidence gaps.

When using formal or informal decision modeling to estimate absolute effect of benefit or harms in specific populations, assumptions may be made to compute estimates, and therefore, when possible, sensitivity analyses using a range of assumptions should be employed. Previously, the USPSTF has publicly stated that:

> "We often have evidence of differences in the epidemiology of disease patterns between populations (for example, differences in incidence, mortality, or competing risks). Although this evidence may be important to communicate to patients and clinicians, differences in epidemiology alone usually do not allow us to make a separate, population-specific recommendation. When assessing the need for a separate, population-specific recommendation, we consider whether the preventive service could reasonably be expected to result in a difference in magnitude of net benefit in the specific population based on this epidemiology." (Bibbins-Domingo et al.)[14]

Evidentiary thresholds for what the USPSTF deems "reasonably be expected to result in a difference" have not been established, and have been treated differently across topics and within topics across time (e.g., the 2016 decision not to lower the starting age for screening for colorectal cancer in Black persons vs. the 2021 decision to lower starting age for screening in all persons).[32,33] When to invoke informal modeling or review of existing decision models, as well as the evolution of evidentiary thresholds using formal or informal decision modeling and NRSIs at higher risk of bias to estimate differences in absolute effects to support different letter grade recommendations based on this information, is a priority area for further attention/work.

For insufficient evidence and I statements, see *Research and practice gaps* below.

Practice Considerations and Future Research

Other important health equity considerations pertain to identifying populations for a given preventive service (i.e., risk assessment), implementing the preventive service in clinical practice, and articulating important research and practice gaps.

Risk assessment. USPSTF recommendations commonly depend on risk assessment to identify a person or population that would benefit from a given preventive service. Risk assessment may include univariate or multivariate risk prediction. When appropriate, social risk factors should be considered alongside clinical risk factors. When multivariate risk prediction tools are recommended, methods are developed for the USPSTF to understand limitations of race-aware risk prediction models and fairness considerations to inform risk targeted care.[29] These methods can be applied to populations experiencing health disparities beyond differences in racial and/or ethnic groups. If multivariate risk prediction can be used to identify the population who should receive the preventive service, the risk of bias that may be embedded in these tools, as well as fairness considerations about these risk tools, should be addressed as early as the Topic Leads' discussion premeeting. If the risk assessment tool is formally addressed as a KQ, a row could be added to the Evidence Grid on the concern bias or fairness using risk assessment; however, methods to answer this would need development and to undergo pilot testing.

Implementation. The GRADE EtD health equity question four asks if there are important considerations that people implementing the intervention should consider to ensure that inequities are reduced. The USPSTF should strive to understand "What is the impact of its recommendation on health equity?" and what practice considerations are important to articulate to ensure that inequities are reduced, new inequities are not created, and at a bare minimum that existing inequities are not exacerbated. This understanding will be informed by background matter and CQs in the supporting evidence documents as

well as its own expertise.

If the preventive service is more complex, not widely available, and/or more costly or resource intensive, the USPSTF should consider what are the resources or considerations around feasibility required to deliver a preventive service. This may include availability, quality, and sustainability of intervention, as well as health system considerations for delivery of intervention. If there is not equitable distribution, quality, and/or there are other barriers to delivery of the preventive service (or immediate downstream testing/management), the USPSTF should consider language acknowledging barriers to mitigating health inequities and articulating clinical practice gaps (see **Evidence Deliberation: Research and practice gaps**).

If the preventive service (or immediate downstream testing/management) is a fixed resource (e.g., colonoscopy), the USPSTF should consider if its recommendation would potentially exacerbate observed disparities by shifting resources away from disadvantaged populations. If the preventive service is more intrusive/invasive and/or there are multiple options for a given preventive service, the USPSTF should consider if the acceptability (including patient preferences) or receipt of the preventive service differ across populations. It is important not to conflate observed low receipt of a preventive service with the lack of acceptability. Multiple factors contribute to the receipt of preventive services, from obvious factors like access to and availability of a preventive service to more subtle but equally important factors like racial discordance with providers, or provider racial bias that may lead to a perceived, rather than actual, lack of acceptability to the patient. If the preventive service has suboptimal receipt in clinical practice, the USPSTF can consider the evidence on interventions to increase receipt of the preventive service and include language endorsing effective interventions or directing its stakeholders to organizations with guidance in this area. Separate from the Evidence Grid, the questions "What is the impact of the recommendation on health equity?" and "What practice considerations may mitigate health inequities?" should be answered in pilot tests.

Research and practice gaps. Typically, evidence gaps and future research needs are derived from KQs. When there is very limited evidence (i.e., due to volume, risk of bias, and/or applicability of studies) in certain populations, it may be important for the USPSTF to articulate evidence gaps and related future research needs. While not all evidence gaps necessitate an I statement, the USPSTF should consider issuing an I statement related to health equity when an A/B/C recommendation explicitly omits (a) specific population(s) because there are plausible differences in effectiveness or harms of preventive services. For example, female smokers were excluded from the 2019 B recommendation to screen male smokers ages 65 to 75 years for abdominal aortic aneurysm.[34] While females are not at greater risk of abdominal aortic aneurysm, they are at risk for rupture at smaller sized aneurysms, resulting in an I statement for female smokers ages 65 to 75 years.

Future research needs related to health equity should be articulated, regardless of letter grade, when evidence is lacking in specific populations experiencing health inequities and there is a concern for: 1) differential magnitude of benefit or harm in specific populations, 2) differential certainty of benefit or harm in specific populations, and 3) differential implementation needs of preventive service in specific populations (e.g., what type of service, age to start or end preventive service).

The USPSTF convened a working group following the 2022 National Academies of Sciences, Engineering, and Medicine (NASEM) report "Closing Evidence Gaps in Clinical Prevention"[35] to

bolster its work and role in calling for future research with attention to health equity–related evidence gaps. There is an opportunity to broaden future research needs beyond the evidence for KQs. Evidence gaps and future research needs can also be derived from health equity CQs (e.g., when mechanisms contributing to disparities are uncertain, when evidence on improving receipt of preventive services is limited). Some CQs may also highlight important practice gaps, in addition to research gaps, that directly affect the implementation and receipt of good-quality preventive care (preventive service and immediate downstream care). Often, the key drivers of observed disparities are due to structural factors upstream or downstream to the preventive service, and/or structural factors leading to inequitable delivery or receipt of quality preventive care. The USPSTF could in theory articulate critical practice gaps, and potential policy interventions to address these gaps, to improve health equity; however, this would be a departure from the USPSTF purview and would need careful thought and pilot testing.

Recommendation Statement

In 2019, the USPSTF revised its Recommendation Statement template to better support implementation by primary care clinicians and meet the needs of newer audiences.[17] In general, the Recommendation Statement should use inclusive terminology when referring to specific populations (see **Evidence Review: Chapter 1**). The language around referring to populations should be consistent with supporting evidence reviews and decision analyses, and when different, the divergence in terminology should be purposeful.

Summary of Recommendation

The Summary of Recommendation (aka top line) provides succinct messaging about to whom (which populations) the recommendation applies. In certain instances, the USPSTF may issue a different letter grade recommendation for a specific population.

Importance

The Importance section should include a brief description of the variation in epidemiology of the condition and its health outcomes by population to illustrate known health disparities, and if known, the key drivers of these disparities (see **Work Plan: Section I)**.

Assessment of Magnitude of Net Benefit and Supporting Evidence

If there are clinically significant differences in the benefits or harms of the preventive service across populations, this should be described under Assessment of the Magnitude of Net Benefit, the accompanying Summary of USPSTF Rationale table, and the corresponding Supporting Evidence section (see **Evidence Deliberation: Deliberation of Net Benefit**). Absolute and relative effects, along with the certainty of these effects, should be detailed in the Supporting Evidence section. The rationale for applicability and extrapolation of evidence from one population to another should also be described

in these sections. If the USPSTF found reason not to extrapolate evidence to specific populations (see **Evidence Deliberation: Applicability)**, the rationale for this should be elevated to the Summary of USPSTF Rationale table.

Per the GRADE EtD Framework guidance, the USPSTF could consider text about whether the recommendation is anticipated to increase or decrease health equity. For example, "[evidence from xxx] suggests/shows that (not) utilizing the [preventive service] (probably) relatively disadvantages a [specific population]" (i.e., advantages all populations but better in some populations more than others).[6] If desired, this could be pilot-tested as an addition to the Summary of USPSTF Rationale table.

Practice Considerations

Practice considerations around health equity can be included in a new Health Equity subsection or subsumed under the existing Practice Considerations subsections. If a new Health Equity section is desired, it could be applied to all topics with an A, B, or C recommendation for which significant health disparities are observed. A new section on Health Equity should undergo pilot testing to determine how best to utilize this subsection and its utility for D recommendations and I statements. Regardless of whether a new section is created, health equity–related practice considerations should include details about identification of the population(s) under consideration and, if applicable, which populations are excluded from this recommendation, with the rationale for their exclusion (e.g., those at highest risk are excluded because the preventive service offered is considered disease management). If the recommendation focuses on a population based on risk, the USPSTF should be explicit if it is an elevated risk of having the condition, having worse outcomes from the condition, or both.

In addition, this section should offer guidance on how to identify these populations at elevated risk inclusive of social, as well as clinical, risk factors. In general, race and/or ethnicity should not be used as a proxy for a risk factor that can otherwise be clinically determined. If the socially constructed category of race is used as a risk factor, attention should be given to communicating why it is a risk factor (so as to avoid misinterpretation of genetic or heritable differences across socially constructed categories). If multivariate risk assessment tools including race and/or ethnicity or other social risk factors are being used to identify persons at risk, limitations and fairness considerations for using these tools compared to usual practice or univariate risk assessment should also be described in a designated Health Equity subsection or the Assessment of Risk subsection (see **Evidence Deliberation: Risk prediction**).

Health equity practice considerations should also address implementation issues regarding the preventive service. Health equity practice considerations should directly address differential implementation of the preventive service for which there are health disparities based on differences in epidemiology, even if there is not a separate recommendation for specific populations. For example, in the 2021 recommendation on screening for prediabetes and diabetes in adults, the USPSTF noted that:

> "Clinicians should consider screening at an earlier age in persons from groups with disproportionately high incidence and prevalence (American Indian/Alaska Native, Asian American, Black, Hispanic/Latino, or Native Hawaiian/Pacific Islander persons) or in persons who have a family history of diabetes, a history of gestational diabetes, or a history of polycystic ovarian syndrome, and at a lower BMI in Asian American persons. Data suggest that a BMI of 23

> or greater may be an appropriate cut point in Asian American persons."[36]

If desired, other implementation issues that the USPSTF considered during evidence deliberation should be mentioned in a Health Equity subsection or an Implementation subsection (i.e., resources, feasibility, acceptability, or receipt) (see **Evidence Deliberation: Implementation**). If there is differential receipt of the preventive service as a driver of observed disparities, interventions to improve the receipt of the preventive service and/or tailoring of the preventive service can be detailed in this section with any relevant materials to help with implementation in specific populations referenced under "Additional Tools and Resources." In select instances in which the receipt of immediate subsequent management (e.g., colonoscopy following abnormal stool testing, colposcopy following abnormal cytology or hrHPV) are driving observed health disparities, relevant materials to help with receipt of followup care can also be referenced under "Additional Tools and Resources." Given the departure from the USPSTF purview and additional resources needed to inform the other implementation considerations, this should be pilot-tested.

Another area for future development to better address health equity in USPSTF recommendation statements is the use of "good practice statements" (i.e., where there is a high level of certainty that the recommendation will do more good than harm, but where there is no empiric evidence to support the statement because it is implied that a study need not be conducted).[37] In general, guidelines should invoke these types of statements sparingly.[38] However, on occasion, there might be a role for making a statement that is clinically important but not appropriate for the assessment of the magnitude and certainty of the evidence. The World Health Organization uses these statements along with its evidence graded recommendations. Examples from two different World Health Organization guidelines are:

> "Health services should be made available, accessible, and acceptable to sex workers based on the principles of avoidance of stigma, nondiscrimination, and the right to health."[39]

> "Health-care providers should provide first-line support that is gender sensitive and child or adolescent centered, in response to disclosure of sexual abuse."[40] [Following this statement is a list of what is meant by gender and child/adolescent centered.]

Research Needs and Gaps

The Research Needs and Gaps section should include specific future research needs related to mitigating health inequities. This may also include evidence and practice gaps identified through the CQ(s) (see **Evidence Deliberation: Research and practice gaps**). If appropriate, the Recommendation of Others section should include population-specific recommendations and considerations by other major professional societies, national advocacy organizations, and the USPSTF's key partners. If any of these groups offer resources that may be useful in implementing the USPSTF recommendation, these can be referenced under the Practice Consideration section's "Additional Tools and Resources." Statements around articulating clinical practice gaps would need to be pilot-tested.

Dissemination of Recommendations (and Supporting Documents)

Draft Recommendation

Currently, the draft recommendations (and supporting evidence documents) are sent by email to those who sign up to receive announcements from the USPSTF and are posted on the USPSTF website to solicit input from the public during the public comment period. The email list is open to all organizations and individuals who are interested in being informed of Task Force activities. To support the accuracy and relevance of Task Force recommendations, D&I partners, Federal partners, and key stakeholders with content-specific interest attend partner meetings and calls with AHRQ staff and Task Force members and receive emails regarding draft recommendations, which include a partner communications toolkit.

During the public comment period, proactive engagement with key partners, and other organizations caring for specific populations, can facilitate soliciting feedback specific to health equity (see **Topic Nomination, Selection, and Prioritization**). As mentioned before, orientation for D&I partners regarding the scope of the USPSTF will enhance meaningful feedback on the draft recommendations. Similar to obtaining feedback on the draft Research Plan, guiding questions may be used to improve the response rate and quality of feedback on equity specific issues, for example:

1. For A/B/C recommendations,
    a. Will the recommendation improve health outcomes in your population(s)? Any concern that the recommendation will exacerbate health disparities?
    b. Are there barriers to implementing the recommendation in your population(s)?
    c. Are there resources that can help with implementation of the recommendation?
2. For D recommendations or I statements,
    a. Any concern that this recommendation/statement will exacerbate health disparities?
3. For any recommendation or I statement,
    a. Are there important future research needs to help mitigate/address health disparities in your population(s)?

Analogous questions may be used to solicit feedback on the accompanying evidence review or commissioned decision analyses; however, to minimize the burden on key partners, this may not be warranted.

Final Recommendation

Communication strategies primarily focus on disseminating the final recommendation to stakeholders, and for each stakeholder to disseminate and implement the recommendation to their membership. From a health equity perspective, it would be helpful to know what, if any, need for information exists. For example:

- Is the lower receipt of recommendations due to dissemination and/or implementation barriers?
- Is there a need for a more focused dissemination strategy to clinicians, health systems, and

organizations serving specific populations?
- Does the recommendation provide actionable messages regarding addressing health equity in their populations?

Efforts to understanding how the D&I partners currently disseminate the recommendations, as well as the barriers and opportunities each partner experiences, are currently underway and will be critical to designing future engagement strategies. Planned communications pilot projects with the partners will help identify common needs across multiple partners and will explore a new communications product or activity that could encourage dissemination across partners.

Communication strategies using media and social media platforms (e.g., LinkedIn) play an important role in disseminating USPSTF recommendations. The Communications Team helps develop messaging for each topic, which should include proactive (e.g., "What you are going to say?") and reactive (e.g., "How you are going to respond?") health equity talking points. When relevant, interviews should take advantage of opportunities to pivot toward health equity talking points. Depending on the information gaps, there may be a need for other communication or media strategies to target specific populations through, for example, community-based organizations or other public service communication outlets. If patient or public facing communication is desired, communication strategies should consider language access and accessibility for those at low/lower English literacy or at/below Federal Plain Language Requirements (e.g., people whose first language is not English, people with limited English proficiency, people who communicate in formats such as ASL, people with intellectual disabilities who require extreme low literacy, and older adults).

All USPSTF Recommendation Statements and supporting evidence documents are published in *JAMA*. *JAMA* uses a passive mechanism to push its Table of Contents to its subscribers and persons who elect to be on its listserv, which are primarily clinicians. This Table of Contents highlights important newly released articles which always includes USPSTF recommendations. Podcasts, and occasionally other material, are developed to accompany the publication of the Recommendation Statement. If relevant, these podcasts can feature health disparities and specific populations, especially if there are equity-specific actionable messages in the Recommendation Statement.

Currently, the main communication strategy for future research is a Report to Congress. The Report to Congress calls attention to high-priority research gaps from the previous fiscal year's recommendations, which are related to the topic theme of the report. However, the USPSTF can broaden the identification of future research needs to those derived from CQs and may consider highlighting practice gaps related to health equity (see **Evidence Deliberation: Research and Practice gaps**). In addition to working with the National Institutes of Health, working directly with the Patient-Centered Outcomes Research Institute and other funders (e.g., Robert Wood Johnson) with an interest in health equity could help accelerate addressing important research and clinical practice gaps. If the USPSTF chooses to identify equity-related clinical practice gaps, there may be other communication or media strategies to target other audiences. In addition, key partners can serve as strategic partners to disseminate research and policy needs. Disseminating practice gaps would entail working with professional societies and key Federal agencies (e.g., CMS). Media talking points should include messages around research and practice gaps that can be used for reactive messaging when the answer is "We don't know" to pivot to health equity–specific research needs. Further work on how best to disseminate research and practice gaps related to health equity to a broader audience (e.g., clinicians, health systems and decision makers,

public, researchers, and funders) is needed.

Conclusions

This framework is an initial attempt to describe how health equity issues could be considered at each phase of the USPSTF guideline-making process. Although many of these considerations and methods are already part of the USPSTF process, we do introduce new items for consideration, many of which push the boundaries of the USPSTF's purview and current processes, and therefore their appropriateness should be considered in the greater context of the USPSTF's role. Executing this entire framework and checklist as described will be challenging and will take additional time and resources, even if further methods are developed where needed. Nonetheless, whether adopted in its entirety or in parts, the framework offers guidance to the USPSTF in its mission to develop a more transparent, consistent, and intentional approach to addressing health equity in its portfolio.

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Table. Health Equity Framework Table With Checklist

	Description (What)	**Rationale (Why)**	**Checklist Items (How)**	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
Topic nomination, selection, and prioritization	Consider health equity during the nomination, selection, and prioritization process	To elevate/prioritize topics that have significant inequities across different populations	Use health equity as a criterion for the nomination, selection, and prioritization process	X			
			Consider that topics with health equity considerations may not be appropriate for the reaffirmation process	X			
			Consider health equity information from background documents	X			
	Solicit/develop new or evolve existing topics with a health equity focus	To expand the USPSTF portfolio to mitigate important inequities relevant to prevention in primary care To maximize impact of existing recommendations on mitigating health disparities	Public and key partners[e] submit new topic nominations	X			
			Orient key partners[e] to understand USPSTF scope and engaging in process			X	
			Proactive/periodic outreach to key partners[e] (and others) for topic nominations specific to health equity and related social risk factors		X		
			Review public comments (of prior recommendations and Research Plans) and background documents for longstanding topics with A/B recommendations to determine if/how to evolve topics to address health equity			X	X
			Engage key partners[e] for input on how to address health equity in topics, in particular new topics, topics with longstanding A/B recommendations (and selected longstanding D recommendations and I statements) that may warrant an evolution in scope		X		
Work Plan	Detail health disparities and health inequities by specific populations	To understand the differences in the incidence/prevalence of the condition, its risk factors, as well as	Include in "Prevalence and Burden of Disease/Illness" section whether specific populations are disproportionately affected by the condition or morbidity/mortality from condition	X			
			Include in "Risk Factors" upstream determinants that lead to disparities in condition (this includes structural and social determinants as well as individual social risk factors)	X			

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
		morbidity and mortality from the condition to inform need for additional CQs or other scoping considerations To understand the mechanisms behind these observed disparities to inform possible needed CQs	Include in the "Etiology and Natural History" section differences in etiology or natural history that lead to disparities in morbidity/mortality from condition		X		
			Include in "Detection/Screening" and "Intervention/Treatment" sections potential factors that may mediate or moderate screening or intervention effectiveness		X		
			Include in "Current Clinical Practice" section differences in access to and receipt of screening and interventions, followup to abnormal screening, and treatment that lead to disparities in morbidity/mortality from condition	X			
	Identify evidence since prior recommendation in specific populations	To understand the evidence base in specific populations to inform inclusion criteria (if there are reasons to believe the evidence is not applicable to specific populations of interest)	If limited RCTs on effectiveness, consider including NRSIs in specific populations (see below *Evidence review: Detail results of included studies by specific populations*)			X	
			For mature topics that may need different KQs due to change in focus to health equity or care delivery, consider broader evidence scan to inform new KQs			X	X
	Visually depict health equity considerations in conceptual framework (in or alongside analytic framework)	To conceptualize preventive services within their broader context, inform possible CQs, and communicate health equity considerations at the Research Plan phase	Adapt existing analytic framework or use other explanatory models alongside analytic framework to depict relevant health equity considerations in Work Plan +/- Research Plan			X	

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
	Articulate KQs and CQs related to health equity	To include additional information in the evidence review that would help the USPSTF consider the evidence on benefits and harms in the context of specific populations with the greatest burden of illness	Consider a CQ on patient values if there are significant differences in patient values of important outcomes (or the balance of net benefit is affected by patient values)			X	
			Consider CQ on resources and feasibility if a preventive service is complex, not widely available, and/or more costly/resource intensive		X		
			Consider a CQ on acceptability (including patient preferences) if there are multiple options for a preventive service, service is more intrusive/invasive, or suboptimal receipt exists		X		
			Consider a CQ on how to increase the receipt of preventive service if there is suboptimal receipt of an intervention		X		
			Consider new KQs (or CQs) addressing comparative effectiveness and implementation of preventive services (or downstream services) if a preventive service is standard of care and health disparities are at least in part driven by prevention			X	
	Develop inclusion criteria that allows for adequate evidence base	To include evidence in KQ that represent populations typically not or underrepresented in clinical research	In the "Inclusion/Exclusion" table, identify specific populations of interest (in table or as footnote)	X			
			In the "Inclusion/Exclusion" table, identify potential differences in the delivery of interventions (if applicable)	X			
			Consider nontraditional KQ, CQ, or non-disease–oriented outcomes that may be important to achieve health equity with respect to the delivery of clinical preventive services			X	X
			Consider including NRSIs even if robust RCT data exist for benefits (if RCT data in narrow or homogenous populations)			X	
			Consider including High Human Developmental Index countries (e.g., Mexico, Brazil, or China) and, when applicable, low-to-middle income countries		X		

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
	Detail analyses by specific population	To identify a priori populations of most relevance to minimize bias and communicate at Research Plan phase	Include in "Data Analysis" section, specify all specific populations of interest	X			
			Include a dedicated section in Research Plan addressing evidence synthesis approach to addressing heterogeneity in populations, settings, and interventions, as well as, if appropriate, other health equity considerations		X		
	Obtain health equity specific feedback on Work Plan/Research Plan	To assure Work Plan/Research Plan identify relevant health equity issues, frames these issues correctly, and addresses these issues adequately (within reason according to scope of USPSTF recommendation and with attention to review resources)	For new topics or existing topics with clinically significant health disparities, gather expert review of Work Plan with equity lens, and include in "Use of Outside Experts" section		X		
			Use public comment period and proactive outreach to specific organizations and key partners[e] during this period to solicit feedback specific to health equity (may use guiding questions to solicit more meaningful feedback)		X		
			Use public comment period or patient input to identify whether additional outcomes are warranted			X	
Evidence Review	Use preferred terminology	To use inclusive language when referring to specific populations	Use inclusive language when possible[f]	X			
	Detail health disparities by specific populations	To understand the mechanisms behind observed disparities to frame CQs to inform clinical considerations	(See above *Work Plan: Detail health disparities*)	X			
	Detail CQs in methods	To highlight important equity issues to be addressed in the	(See above *Work Plan: Visually depict health equity considerations*)		X		
			List CQs in methods and specify methods to address CQs		X		

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
		report, and be transparent about methods used to answer CQs	Consider including data sources and searches for CQs			X	
			Use non-quantitative study designs and data from multiple sectors (clinical, public health, and social)			X	
	Detail methods for critical appraisal of risk assessment	To be transparent about methods for assessing algorithmic bias in race-aware models	Consider using health equity signaling questions to evaluate the risk of algorithmic bias specific to race and ethnicity in relevant clinical prediction models		X		
	Detail analyses by specific populations	To be transparent about methods used for subgroup analyses	List which prespecified populations are of specific interest	X			
			Describe methods for credibility assessment of subgroup analyses	X			
			Describe methods for meta-analyses and investigating heterogeneity (if applicable)	X			
	Detail populations represented in the included evidence	To assess applicability of evidence to populations experiencing greatest disparities	List % persons by specific populations in tables/text (if relevant)	X			
			Describe applicability of studies (external validity) in addition to risk of bias (internal validity)	X			
	Detail results of included studies by specific populations	To allow for a detailed assessment of magnitude of benefits or harms by specific population	Report relative effects and absolute effects (if available) by specific population in a separate subsection in "Detailed Results by Outcome" section	X			
			Consider noting if a difference in relative vs. absolute effect is hypothesized		X		
			Comment on credibility assessment of subgroup analysis (likelihood of spurious findings, confounding, and power)	X			
			Specify reference group (e.g., whole population, White population)	X			

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
			Consider stratification of results and comment on consistency findings across populations	X			
			Caution on drawing conclusions for subgroup differences based on stratification or meta-regression by specific populations, as opposed to drawing conclusions based on within-study subgroup analyses	X			
			Note if no results available by *prespecified* populations	X			
			If NRSIs are included, discuss risk of bias and data quality limitations (especially for NRSIs using routine clinical practice data) that may lead to erroneous conclusions that may further exacerbate existing disparities			X	
	Detail risk assessment models for specific populations	To understand model performance and bias as applied to more diverse populations	Outline specific populations in which the risk assessment model has been evaluated		X		
			Outline the findings of critical appraisal for potential bias to articulate limitations or benefits of models when compared to usual care or other alternatives		X		
	Detail findings by specific populations in the summary of evidence	To allow for a summary assessment of magnitude of benefits or harms by specific population	In the Discussion's "Summary of Evidence" section, consider using an outcomes table to demonstrate absolute effects by specific populations if data allow. If data in tables are not derived from included studies, be transparent about how baseline risks are estimated (and how/if they impact the magnitude of benefit or harm)		X		
			In the "Summary of Evidence Table," consider a separate row by specific population (if sufficient data exist). If evidence does not exist, discuss limitations of evidence in the "Evidence Limitations or Applicability" columns of the table		X		
	Detail findings of CQs	To allow for a summary of clinical practice considerations related to health equity	In a dedicated section on "CQ findings," describe results of CQs. A high-level summary of these findings should be in the Introduction (if applicable) or Discussion sections referencing this section		X		

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
	Summarize findings from KQ and CQ in a health equity subsection (or appendix)	To integrate findings across KQ and CQ for the USPSTF's evidence deliberation	Include a high-level summary of known disparities for prespecified populations, summary of absolute (and relevant relative) effects by population, and findings from contextual questions related to health equity. This section should allow for the USPSTF to deliberate the evidence for the net benefit and practice considerations for the preventive service (see below *Evidence Deliberation*)		X		
	Detail limitations and future research needs for specific population	To be transparent about applicability of findings to specific populations or settings and to facilitate meaningful research for key evidence gaps relating to health equity	If relevant, describe limitations by specific population or settings as well as type(s) of research needed to address these limitations		X		
			Articulate research needs derived from CQs as well as KQs		X		
	Obtain expert review with health equity lens	To vet the evidence review's framing and findings around health equity	Invite expert reviewer(s) and Federal partners with expertise in health equity or in populations experiencing disparities		X		
			Consider adding questions specific to health equity to reviewer form		X		
Decision modeling	TBD	TBD	TBD			X	
Evidence Deliberation	Deliberate net benefit	To understand if the magnitude and/or certainty of benefits or harms vary by population	If there are populations that might be disadvantaged in relation to the condition or preventive service, answer "What are the differences in benefits or harms by population due to differing baseline risk (absolute differences) and/or variable responsiveness or vulnerability (relative differences) to a preventive service?"	X			
			Determine how applicable the included evidence is to specific disadvantaged populations (evidence is generally applicable			X	

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
			unless there are compelling reasons for differences due to e.g., biology/physiology) Other reasons such as sociocultural influences or access and other healthcare delivery–related issues impacting the effectiveness or harms of a preventive service are generally not appropriate reasons to exclude specific populations from the recommendation, but may require practice considerations				
			Determine if there is evidence to suggest different magnitude of effects, what is the certainty of these findings; (when) should there be differences in evidentiary thresholds in populations less likely to be included in traditional research			X	
			Describe rationale for using informal modeling (outcomes tables) or formal modeling to support a different or separate recommendation for specific populations, and describe limitations from these data			X	
			Describe rationale for using NRSIs to support a different or separate recommendation for specific populations, and describe limitations from these data			X	
			Incorporate additional rows in the "Evidence Grid" for benefit and harms for specific populations, taking into account applicability and limitations of modeling and NRSIs into certainty of evidence		X		
	Identify important considerations for implementation that may redress observed inequities	To understand if there are important considerations that should be made when implementing a preventive service to make sure inequities are reduced	As part of or separate from the "Evidence Grid," answer the question "What is the impact of the recommendation on health equity?"		X		
			If the preventive service is complex, not widely available, or more resource intensive, identify resource/feasibility considerations		X		
			If the preventive service is invasive, has suboptimal receipt in clinical practice, or multiple options exist, identify if the acceptability of the service varies across populations		X		

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
			If there is suboptimal receipt in specific populations, identify if there are ways to increase the receipt of the preventive service		X		
	Identify equity relevant limitations of multivariate risk assessment	To determine how best to (or not to) implement multivariate risk assessment for different populations	When considering a risk stratified recommendation, discuss whether multivariate risk assessment may reduce bias or improve fairness compared to alternate approaches (e.g., single risk factor stratification)		X		
			If there are concerns for algorithmic bias or fairness in multivariate risk assessment discuss approaches to mitigate potential concerns		X		
	Identify important health equity evidence gaps	To determine how best to call for future research needs	When there is limited evidence for specific populations: consider issuing an I statement calling for future research, if there is an A/B/C recommendation that omits a specific population or there is a D recommendation, but specific groups have disproportionate burden of disease and there is a plausible reason there may be differences in either benefits or harms	X			
			If there is low certainty of benefit or harm in a specific population and plausible reasons for differences or uncertainty about the applicability of studied populations to specific populations, consider including language in "Future Research Needs" section	X			
			When there are information gaps identified by CQs, consider including language in "Future Research Needs" section		X		
			When there are limitations for risk assessment used in practice, consider including language in "Future Research Needs" section			X	
	Identify important health equity practice gaps	To determine how best to identify practice gaps related to the clinical preventive service	When there are important considerations that should be made when implementing a preventive service to make sure inequities are reduced, consider including relevant practice gaps			X	X

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
Recommendation Statement	Detail how recommendation statement applies to specific populations	To communicate important considerations for specific populations to help mitigate health disparities	Use inclusive language and avoid language that may stigmatize specific populations. Make sure language is consistent with supporting evidence products, and any differences in language is purposeful	X			
			If there is recommendation for a specific population (different from the general population), due to clinically significant differences in the benefits or harms across populations, include under "Assessment of the Magnitude of Net Benefit" section, the accompanying "Summary of USPSTF Rationale" table and the corresponding "Supporting Evidence" section	X			
			If there are potentially clinically significant differences in benefit or harms across populations but uncertainty (and therefore no separate recommendation), consider including statement under "Assessment of the Magnitude of Net Benefit" section, the accompanying "Summary of USPSTF Rational" table, and the corresponding "Supporting Evidence" section		X		
			If significant health disparities are observed, include variation in epidemiology of condition and health outcomes in "Importance" section	X			
			Include populations for whom this recommendation is or is not applicable under "Populations Under Consideration" subsection under "Practice Considerations" section	X			
			Consider text around applicability of included evidence to specific populations under "Assessment of the Magnitude of Net Benefit," the accompanying "Summary of USPSTF Rationale" table and the corresponding "Supporting Evidence" section		X		
			If clinically significant health disparities are observed, consider a dedicated "Health Equity" subsection under "Practice Considerations" section		X		
			Consider including a statement in "Health Equity" subsection whether the recommendation is anticipated to increase or decrease health equity (e.g., "[evidence from xxx] suggests/shows that (not) utilizing the		X		

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
			[preventive service] (probably) disadvantages a [specific population]")				
			Specify which groups are at particular risk (inclusive of social and clinical risk factors) and why under "Assessment of Risk" section	X			
			If multivariate risk assessment is used (or recommended for use) in practice, consider guidance for mitigating potential limitations of assessment under "Assessment of Risk" section		X		
			Consider text around differential implementation of preventive service for specific populations or settings (even if no separate recommendation is made) in a "Health Equity" subsection and/or under "Practice Considerations" section		X		
			If there is differential receipt of preventive services for specific populations, consider providing resources to improve the uptake of services under "Additional Tools and Resources" section		X		X
			If there are important evidence gaps identified in the evidence review and during the evidence deliberation, include a summary of these under "Research Needs and Gaps" section	X			
			Consider articulating important clinical practice gaps in addition to future research gaps			X	X
			Consider "good-practice statements" that could help address equity issues			X	X

	Description (What)	Rationale (Why)	Checklist items (How)	Routine[a]	Pilot[b]	Develop[c]	Scope[d]
Dissemination (and Implementation) of Recommendations	Obtain stakeholder input on draft recommendation and supporting documents	To review the draft recommendation statement, draft evidence review (+/- draft modeling report) with respect to health equity considerations	Consider proactively soliciting input on draft products from key partners and other organizations that may have expertise in health equity and disparities for the condition or preventive service during the Public Comment period (may use guiding questions to solicit more meaningful feedback)		X		
	Communicate recommendation populations	To increase the update in specific populations	Develop proactive and reactive media messaging for specific populations and health equity	X			
			Disseminate recommendation to key partners[e]	X			
			Disseminate recommendations through media that focus on groups representing or serving specific populations		X		
			Include actionable messages regarding health equity in recommendations		X		
			Facilitate implementation of recommendations for specific populations leveraging existing key partners[e]		X		
	Communicate gaps organizations, funders, and researchers	To increase research gaps	Develop media messages for research needs and use "We don't know" answers to turn attention to research needs to mitigate health disparities		X		
			In the "Report to Congress" section, consider adding important evidence and practice gaps for specific populations derived from CQs and KQs		X		X
			Disseminate future research needs and practice gaps for specific populations to key partners[e] and other relevant audiences (e.g., research funders, policy makers, researchers, and clinicians)		X		
	Produce tools to facilitate implementation	To increase the receipt of preventive services in specific populations	TBD			X	X
	Monitor and audit implementation of recommendations	To understand if/how recommendations are affecting observed health disparities	TBD			X	X

Footnotes: a=currently being done; b=currently being piloted or can be piloted now; c=needs further methods development before being piloted, feasibility to be determined; d=potentially would broaden the USPSTF purview/scope; e=key partners (Dissemination and Implementation partners, Federal partners); f=use living guidance document, can describe in methods.

Abbreviations: CQ=Contextual Question; KQ=Key Question; NRSI=non-randomized study of interventions; RCT=randomized, controlled trial; U.S.=United States; USPSTF=U.S. Preventive Services Task Force.

Appendix Box 1. USPSTF Partners[1]

Partners Who Support Primary Care Delivery

- American Academy of Family Physicians (AAFP)
- American Association of Nurse Practitioners (AANP)
- American Academy of Pediatrics (AAP)
- American Academy of Physician Associates (AAPA)
- American College of Nurse-Midwives (ACNM)
- American College of Obstetricians and Gynecologists (ACOG)
- American College of Physicians (ACP)
- American College of Preventive Medicine (ACPM)
- American Geriatrics Society (AGS)
- American Medical Association (AMA)
- American Osteopathic Association (AOA)
- American Psychological Association (APA)
- Association of American Indian Physicians (AAIP)
- Health Professionals Advancing LGBTQ Equality (GLMA)
- National Association of Pediatric Nurse Practitioners (NAPNAP)
- National Council of Asian Pacific Islander Physicians (NCAPIP)
- National Hispanic Medical Association (NHMA)
- National Medical Association (NMA)/Cobb Institute

Federal Partners

- Centers for Disease Control and Prevention (CDC)
- Centers for Medicare & Medicaid Services (CMS)
- Department of Defense (DOD) Military Health System
- Department of Health and Human Services, Office of Minority Health (OMH)
- Department of Veterans Affairs (VA) National Center for Health Promotion and Disease Prevention
- Health Resources and Services Administration (HRSA)
- Indian Health Service (IHS)
- National Cancer Institute (NCI)
- National Institutes of Health (NIH)
- Office of the Assistant Secretary for Health, Office of Disease Prevention and Health Promotion (ODPHP)
- Substance Abuse and Mental Health Services Administration (SAMHSA)
- U.S. Food and Drug Administration (FDA)

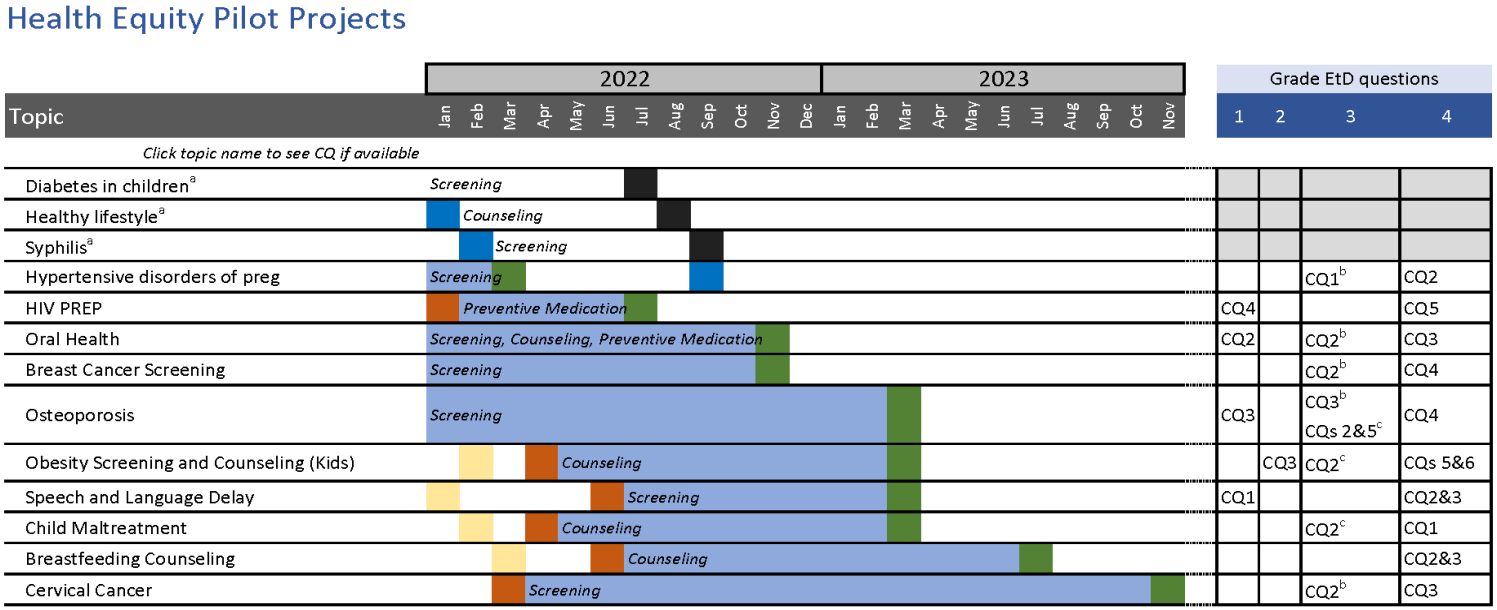
Partners Focused on Healthcare Utilization, Coverage, and Quality

- America's Health Insurance Plans (AHIP)
- AARP
- Business Group on Health (BGH)
- National Committee for Quality Assurance (NCQA)
- Patient-Centered Outcomes Research Institute (PCORI)

Partners Who Develop Recommendations on Prevention

- Canadian Task Force on Preventive Health Care (CTFPHC)
- Community Preventive Services Task Force (CPSTF)

Appendix Figure 1. Gantt Chart of Health Equity Pilot Projects



[a]Recently presented topics, may need additional equity information to inform clinical considerations or in response to public comments

[b]CQ addresses mechanism of action of racism and other social determinants on inequities as background for understanding reasons for differences (informs question 3 and may signal when important to address question 4)

[c]CQs address risk assessment perfomance in populations by race/ethnicity and other specific populations and impacts on fairness (may impact questions 3 and 4)

Grade EtD Questions	Contribution of Evidence Review
1: Are there groups or settings that might be disadvantaged in relation to the problem or intervention of interest?	Generally addressed in introduction (prevalence, burden, risk factors, current clinical practice of update).
2: Are there plausible reasons for anticipating differences in the relative effectiveness of the intervention for disadvantaged groups or settings?	Can be addressed using effect modification in KQs. However, reviews rarely have sufficient data or robust subgroup analysis to be able to examine this.
3: Are there different baseline conditions across groups or settings that affect the absolute impact of the intervention or the importance of the problem for disadvantaged groups or settings?	Discussion may examine how incorporating baseline risk into effectiveness estimates seen in review findings could adderss differences in benefits and harms.
4: Are there important considerations that people implementing the intervention should consider to ensure that inequities are reduced, if possible, and that they are not increased?	May be an important question to address in settings where inequities in uptake or receipt may be part of the driver of differences in outcomes.

Draft RP posted
Final RP posted
Review Process
Deliberation
Draft ES/RS posted
Final ES/RS posted

Appendix. Interim Diversity, Equity, and Inclusion Language Guidance

Overview

Below, the Communications Team has outlined some interim language guidance for AHRQ staff to use when drafting materials on behalf of the USPSTF, specifically regarding target populations and the issues of race, gender, and sexual identity/orientation. As more people articulate their specific, unique identities and our society becomes more aware, accepting, and educated around these issues, the language referring to large populations with similar attributes is evolving rapidly.

While there are many valuable guides that can inform the language the Task Force may consider using (*JAMA*, AP, etc.), ultimately the Task Force sits in a very specific space and will need to make the language choices that best meet its specific needs. In some cases, it will make sense for the Task Force to use language that best reflects a community or the terminology used by a specific publication. In other cases, the Task Force may make choices that consciously advance a specific point of view (like "pregnant persons").

Moving forward, the Communications Team has proposed developing a comprehensive set of recommendations around the Task Force's language related to issues of diversity, equity, and inclusion that is informed by the breadth of the Task Force's work. In the interim, the following recommendations are meant to help guide the development of Task Force materials as deemed appropriate by AHRQ and the Task Force. The Communications Team has included additional thoughts in notes or caveats underneath the guidance as necessary.

General Approach

- Use person-centered language whenever possible (e.g., "people with autism" rather than "autistic people," or "people with overweight and obesity" and "people who have overweight and obesity," rather than "overweight and obese people" or "people who are overweight or obese").
- If you are talking about an individual, use the term(s) that the individual prefers. This guideline trumps all others.
    - *Note:* This is rarely relevant to the Task Force's work, but it's an important item to note.
- Accurately describing the intended audience, with inclusivity in mind, sometimes leads to using more words to convey information. Brevity may be sacrificed for intention and inclusivity.
    - *Caveat:* The implementation of this guidance may vary depending on the medium and the expectation of brevity within it (e.g., social media vs. a journal article).
- If you are describing a specific study (or set of studies that used the same terms), use the designations that the study authors used, with a note that you're doing so.
    - *Rationale:* Many terms are not direct synonyms for each other, so substituting one word for another has the potential to misrepresent the data.
    - *Note:* This can be different than the language that the Task Force chooses to use when it is describing groups overall. See below for exceptions regarding not using descriptors as nouns.

    - *Example:* "In XX study, 50% of people who self-reported as African Americans…"
- Racial and ethnic groups are generally designated by proper nouns and capitalized. Therefore, use "Black people" instead of "black people." Likewise, capitalize terms such as "Native American," "Hispanic," etc. Capitalize "Indigenous" and "Aboriginal" whenever they are used.
    - *Note:* There is some nuance and disagreement around the capitalization of "White." At this point, it may make sense to do so for consistency in a document. We will explore this further as we develop the comprehensive recommendations.
- While recognizing that Indigenous tribes and peoples were the original inhabitants of land used today by various organizations, including AHRQ, has clear value, any questions about whether or not the Task Force should incorporate a related statement into its work will be taken up at a later time. It is worth noting that, as an all-volunteer body, the Task Force is not located in a specific place that can be referenced in a native land acknowledgement.

Word Choice

- Use the most specific terms whenever possible (e.g., Japanese instead of Asian).
    - *Rationale:* Clarity and specificity helps to increase understanding and relevance of messages and recommendations.
    - *Note:* This will be more relevant when referencing specific study data than when providing general guidance in recommendation statements, since the Task Force generally addresses a broad population (though there are notable exceptions, such as Ashkenazi Jewish people in BRCA).
- Only use "diverse" to mean "everyone," never simply "people who aren't White."
- Avoid using race/ethnic identifiers as nouns (e.g., Blacks, Whites, etc.).
    - *Note:* This guidance supersedes the point above about using the specific language from research studies. If the study uses racial/ethnic terms as nouns (e.g., "Blacks"), you should change them to be adjectives (e.g., "Black individuals").
- Hispanic and Latino are overlapping but not synonymous terms, and it's important to know that when making selections. Hispanic references people who have a Spanish-speaking background, whereas Latino references those from Latin America.
    - *Note:* Differentiation between and use of these terms will be explored further in the comprehensive guidance. In the interim, it may make the most sense to use the combined "Hispanic/Latino."
- Avoid the term Caucasian, unless you're reporting how people identified in a study, and then be clear that it was the study characteristics.
- Some terms—especially newer ones—solve specific problems (e.g., Latinx addresses the fact that Spanish is a gendered language) but create others (e.g., Latinx has not been widely adopted yet by the people it is referring to). Similarly, BIPOC has caught on in some circles to bring together multiple communities, but in others it is seen as erasing the specific Black and/or Hispanic experiences by lumping them in with one another.
    - *Note:* These terms will be explored further in the comprehensive guidance.
- Avoid using the terms "subgroup" or "subpopulation" whenever possible to describe a group of people, especially in consumer-focused materials. The term "subgroup analysis"

can be used in a limited fashion in technical documents when there is not a better term available.

- Use "pregnant persons" instead of "pregnant women," even when the research includes a cohort of women.
    - *Rationale:* This change can generally be safely made because women are a subset of persons, so while you are extrapolating, you are fully inclusive of the audience likely defined by the research.
- Issues of sex and gender are extraordinarily complicated when you're focused on people's physical bodies (and what's needed to keep them healthy) in a way most reporting/communications is not.
    - *Note:* These issues will be explored further in the comprehensive guidance.

References

1. U.S. Preventive Services Task Force. Our Partners. Accessed November 27, 2023. https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/our-partners