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Original research

Which actionable statements qualify as good practice statements in Covid-19 guidelines? A systematic appraisal

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Abstract

Objectives To evaluate the development and quality of actionable statements that qualify as good practice statements (GPS) reported in COVID-19 guidelines.

Design and setting Systematic review. We searched MEDLINE, MedSci, China National Knowledge Infrastructure (CNKI), databases of Grading of Recommendations Assessment, Development and Evaluation (GRADE) Guidelines, NICE, WHO and Guidelines International Network (GIN) from March 2020 to September 2021. We included original or adapted recommendations addressing any COVID-19 topic.

Main outcome measures We used GRADE Working Group criteria for assessing the appropriateness of issuing a GPS: (1) clear and actionable; (2) rationale necessitating the message for healthcare practice; (3) practicality of systematically searching for evidence; (4) likely net positive consequences from implementing the GPS and (5) clear link to the indirect evidence. We assessed guideline quality using the Appraisal of Guidelines for Research and Evaluation II tool. **Results** 253 guidelines from 44 professional societies issued 3726 actionable statements. We classified 2375 (64%) as GPS; of which 27 (1%) were labelled as GPS by guideline developers. 5 (19%) were labelled as GPS by their authors

Summary box

What is already known about this subject?

► Good practice statements (GPS) (ie, actionable statements about interventions that would do substantially more good than harm or vice versa) do not qualify for rating the certainty of evidence, but are important statements in guidelines. The GRADE Working Group developed five criteria to assess the appropriateness of issuing a GPS.

but did not meet GPS criteria. Of the 2375 GPS, 85% were clear and actionable; 59% provided a rationale necessitating the message for healthcare practice, 24% reported the net positive consequences from implementing the GPS. Systematic collection of evidence was deemed impractical for 13% of the GPS, and 39% explained the chain of indirect evidence supporting GPS development. 173/2375 (7.3%) statements explicitly satisfied all five criteria. The guidelines' overall quality was poor regardless of the appropriateness of GPS development and labelling.

Summary box

What are the new findings?

- ▶ Statements that qualify as GPS constitute more than half of the actionable statements in COVID-19 guidelines; there was rarely any appropriate labelling and a lack of transparency in the rationale for their development.

How might it impact clinical practice in the foreseeable future?

- ▶ We provide a structured framework for GPS evaluation. Utilisation of this framework by researchers will help monitor the progress around GPS development and evaluate potential barriers slowing the uptake of available guidance by guideline developers.

Conclusions Statements that qualify as GPS are common in COVID-19 guidelines but are characterised by unclear designation and development processes, and methodological weaknesses.

Introduction

Several formal approaches have emerged to structure the process of developing health recommendations in guidelines.¹ Within guidelines, there are a variety of actionable statements for application by clinicians, consumers and other stakeholders.² These actionable statement can be further broken down into the categories of formal recommendations, informal recommendations and good practice statements (GPSs). Formal recommendations use the best available evidence and should be developed based on transparent and trustworthy methods.³⁻⁶ Such recommendations are the central aim of guideline development. Informal recommendations resemble formal recommendations but they lack reporting or use of rigorous guideline development methods. GPSs, sometimes referred to as best practice statements, form a separate category of actionable statements that are considered important to issue for healthcare practice.² GPSs differ from formal and informal recommendations as they are not typically based on systematic reviews of the evidence and do not include a rating of the certainty of evidence using approaches such as Grading of Recommendations Assessment, Development and Evaluation (GRADE).^{7,8} The GRADE approach is the most widely used tool for guideline developers to assess the certainty in effect estimates and subsequently translating the evidence into recommendations using a standardised and transparent evidence to decision framework.^{7,9,10}

Due to the lack of international consensus guidance for GPS development and reporting, they are commonly confused with other GRADEd recommendations. For example, GPSs are frequently reported as strong recommendations with low or very low-quality evidence.¹¹⁻¹³ To clarify this confusion, GRADE proposed the following five criteria to assess the appropriateness of issuing a recommendation as a GPS and differentiate them from GRADEd recommendations⁸: (1) statement is clear and actionable, (2) message is necessary regarding healthcare practice, (3) implementation of the statement likely to result in large net positive consequences, (4) summarisation of evidence would be poor use of guideline panel's time and (5) the rationale connecting the indirect evidence used to support the statement is clear and explicit.

The prevalence and quality of GPS in guideline documents has not been empirically evaluated, particularly during the current COVID-19 pandemic where healthcare professionals, scientific societies and government agencies invested a substantial amount of time and resources in developing clinical practice guidelines to reduce information gaps and improve patient outcomes. Furthermore, the application of the GRADE criteria for GPS have neither been operationalised as guidance for those evaluating guidelines nor for developers of GPS. During the development of the global living map of COVID-19 recommendations and portal for contextualisation (eCOVID-19RecMap)^{14,15} (<https://COVID-19.recmap.org>), we identified and evaluated GPS for their appropriateness for development to inform clinical practice.

Methods**Search**

We systematically searched MEDLINE (PubMed) from 1 March 2020 to 24 September 2021 using a search string: ((practice guideline[PT] OR (practice guidelines as topic*[MH])) NOT (comment[pt] or editorial[pt] or letter[pt] or interview[pt] or case reports[pt] or news[pt])), with no restrictions on the language of publication, as part of work to build the eCOVID-19RecMap.¹⁵ We searched ECRI Clinical Guidelines, International Database of GRADE Guidelines (BIGG database), National Institute for Health and Care Excellence (NICE), the World Health Organization (WHO), Centers for Disease Control and Prevention (US CDC) and Guidelines International Network (GIN)'s libraries using an automated web scraping approach via Application Process Interfaces (API). We also manually searched MedSci and China National Knowledge Infrastructure (CNKI) databases to identify Chinese guidelines.

Additionally, we manually searched websites of the following guideline organisations: Public Health Agency of Canada (PHAC), Scottish Intercollegiate Guidelines Network (SIGN), Canadian Task Force on Preventive Health Care (CTFPHC), European Centres for Disease Control and Prevention (ECDC). We also contacted guidelines developers of all the above organisations to keep us apprised of any new or updated guidelines.¹⁵

Identifying COVID-19 guidelines

We included guidelines eligible for the eCOVID-19RecMap with the most recent guideline uploaded on 24 September 2021. These guidelines reported original or adapted recommendations and were consistent with the WHO definition of practice guidelines while addressing any topic regarding patients at risk for or infected with COVID-19.¹⁶ Online supplemental table S1 describes the definition in detail. We selected guidelines for the eCOVID-19RecMap based on a prioritisation process developed within the eCOVID-19RecMap executive research team (<https://COVID-19.recmap.org/about>). A topic is a priority if it satisfies one of the following in COVID-19 context¹: arises commonly in practice,² uncertainty in practice,³ new evidence to consider,⁴ existence of variations in practice,⁵ important consequences for high resource use/cost,⁶ not adequately addressed in existing guidelines.¹⁷ The priority list was refined weekly according to the climate of the pandemic at the current point in time.

We did not restrict guideline eligibility by population group, organisation, country, guideline quality or language. However, we only extracted and evaluated non-English guidelines that could be translated to English by members of our multinational team. For guidelines with more than one version, we evaluated the most recent update. Guideline eligibility was determined by

Table 1 GRADE criteria for evaluating GPS modified from reference^{8*}

Signalling question*	Description
Is the statement clear and actionable?	Specific statement that includes the specification of the population of interest.
Is the message really necessary in regard to actual healthcare practice?	Without the guidance provided by the statement, clinicians might fail to take the appropriate action. Knowledge of that practice among the clinicians who represent the target audience is suboptimal.
After consideration of all relevant outcomes and potential downstream consequences, implementing the good practice statement results in a large net positive consequence?	Certainty of benefits and harms are great; the values and preferences are clear; the intervention is cost saving; and the intervention is clearly acceptable, feasible and promotes equity.
Is collecting and summarising the evidence a poor use of a guideline panel's limited time, energy, or resources (opportunity cost is large)?	Poor use of a guideline panel's time and resources to collect and link the indirect evidence is an issue of opportunity cost and their time and energy better spent on other efforts to maximise the guideline's methodologic quality and over-all trustworthiness.
Is there a well-documented clear and explicit rationale connecting the indirect evidence?	The rationale should include an explicit statement of the chain of evidence that supports the recommendation.

*The Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group developed these criteria for guideline developers (to designate GPS in their guidelines) and those evaluating the appropriateness of GPS. All five criteria should be fulfilled to designate a statement as GPS.

GPS, good practice statement.

two researchers independently, with consensus or arbitration for a final decision if needed.

Identifying actionable statements that qualify as GPS

We identified actionable statements from the included guidelines using the framework proposed by Lotfi *et al.*² In brief, statements that are actionable in isolation with an expected large net benefit, not GRADEd for strength or the certainty of evidence or accompanied by a citation for supporting evidence and the alternative of the stated statement were judged as illogical or did not conform with ethical norms were qualified as GPS.² Additionally, researchers extracted statements in the guidelines labelled as best practice or GPSs. We used this approach to identify GPS because there is no universally accepted approach for presenting GPS in guidelines and they are often inconsistently labelled.^{13 18} Two researchers extracted the statements and experts in guideline development reviewed them as a quality control step. In addition, we extracted the source, topic (eg, infection prevention and control, vaccination) and intended user and applicable context of each guideline.

Evaluating GPS

We compared the appropriateness of issuing the GPS labelled by guideline developers with statements that qualified as GPS using the five GRADE criteria in table 1.⁸ We piloted a form using answer options of 'yes', 'probably yes', 'probably no' and 'no' and developed instructions for how to use the form (online supplemental figure S1). Trained methodologists held weekly meetings to optimise these judgements by discussing examples from guidelines. We used the following approach for the judgements: researchers selected 'yes' and 'no' answers when information supporting or opposing the qualification of the statement as GPS, respectively, was explicit in the guideline (any primary document or supplements). We selected 'Probably yes' and 'Probably no' when the information supporting or opposing the qualification of the statement as GPS was implicit, respectively. For the statement to fulfil the GPS criteria, all the criteria ii–v must be answered 'probably yes' or 'yes'. We did not include criterion i as part of the assessment for appropriateness of issuing the statement as GPS since it is a requirement for any recommendation.⁸ Online supplemental table S3 presents examples of GPS. We then iteratively developed the

explanations and signalling questions in table 2 and reordered the original GRADE criteria for the purpose of critical appraisal of GPS. We conducted all the evaluations in duplicate, and an expert

Table 2 Characteristics of included guidelines and good practice statements

	N (%)
Guideline Source (n=200 guidelines)	
WHO	128 (64)
Centers for Disease Control and Prevention	25 (13)
Public Health Agency of Canada	12 (6)
European Centre for Disease Prevention and Control	10 (5)
National Institute for Health and Care Excellence	2 (1)
Scottish Intercollegiate Guidelines Network	2 (1)
Other	21 (11)
Field (n=200 guidelines)	
Public health	160 (80)
Health policy and systems	88 (44)
Clinical practice	69 (35)
Health technology assessment	3 (2)
World region (n=200 guidelines)	
Global	100 (50)
North America	43 (22)
Europe-Central Asia	41 (21)
East-Asian Pacific	11 (6)
South Asia	3 (2)
Middle East-North Africa	2 (1)
Recommendation Topic (n=2375 statements)	
Infection Control	940 (40)
Vaccination	451 (19)
Health services and systems	446 (19)
Planning and monitoring	309 (13)
Treatment and rehabilitation	126 (3)
Diagnosis	52 (2)
Screening	51 (2)
Target users (n=2375 statements)	
Healthcare providers and professionals	894 (38)
Public health officials	845 (36)
General population	321 (14)
School administrations	258 (11)
Government	57 (2)

in guideline development validated them. We resolved disagreements by consensus in weekly group discussions.

Guidelines quality appraisal

To evaluate if the guidelines were developed with rigorous methods, we critically appraised their development process using the Appraisal of Guidelines for Research and Evaluation (AGREE) II tool for three out of six domains that were deemed important for guideline credibility: scope and purpose, rigour of development and editorial independence.¹⁹ The other AGREE domains (stakeholder involvement, clarity of presentation domain and applicability) were not included in the evaluation as they are not as critical for determining the overall quality of the guideline. Two researchers independently conducted the evaluations of the guidelines and a guideline development expert subsequently reviewed them. The scores of each domain item were assessed on a seven-point scale; 0% if each reviewer scored a 1 (minimum value) and 100% for a score of 7 (maximum value) by both reviewers. We identified discrepancies when a difference of 3 points or more per item between the reviewers was found. We resolved these discrepancies by consensus or a third reviewer. The final score per item was calculated as the average of scores between reviewers after resolution of discrepancies if any. We extracted the information from the guidelines into the GRADEpro (www.gradepro.org) app through a new module that allows the creation of GPS. We then included the GPS in the RecMap (<https://covid19.recmap.org/recommendations?recommendationFormality=gps>).

Patient and public involvement statement

We partnered with public representatives from the Cochrane Consumer network in the development and conduct of the eCOVID-19RecMap project. The representatives participated in weekly calls of the project executive team where this project was reviewed for relevance of content and provided contextual feedback. The representatives were not involved in the extraction and evaluation of the GPS. The larger eCOVID-19RecMap investigator team also reviewed the design and conduct of the project and provided feedback accordingly.

Statistical analysis

Characteristics of the included guidelines and judgements for each of the GPS evaluation criteria were summarised as percentages. Univariate ORs were used to examine the association between guideline and statement characteristics with issuing of GPS. AGREE II scores were calculated according to the AGREE II manual and reported using the median and IQR. All analyses and figures were conducted with R V.4.1.1 software. GPS evaluation and AGREE II scores were stratified by labelling of GPS by guideline developers.

Results

Characteristics of eligible guidelines

We identified 4533 records through PUBMED, MedSci, hand-searching and 11 guideline databases and websites. We excluded 1401 (31%) guidelines after deduplication and title screening, and a further 700 (25%) after screening at full text. Of the identified COVID-19 guidelines, 412 were related to care in the context of COVID-19 and 1746 pertained directly to COVID-19. The guidelines pertaining directly to COVID-19 were eligible for publishing on the eCOVID-19RecMap. Of those guidelines, 253 were extracted and evaluated since the formal launch in November 2020 to September 2021 (figure 1). We identified 2375 of 3726

(64%) statements that qualified as GPS in 200 of 253 (79%) guidelines included on the eCOVID-19RecMap (online supplemental table S2). Those 200 guidelines were included in our analysis. On average, 82% of the statements per guideline (range from 2% to 100%) qualified as GPS.

Characteristics of GPS

Table 3 shows that 64% of the guidelines were published by WHO and 13% by the CDC. One hundred and sixty (80%) guidelines were in the field of public health and 50% were produced for global use. Forty per cent of the GPS provided guidance on infection control while the remaining were on a variety of topics including vaccination, planning and monitoring health services, screening, diagnosis and treatment. The GPS targeted a range of users: 38% were nominally intended for healthcare providers and professionals and 36% targeted public health officials. The remaining GPSs were intended to be used by individuals outside the healthcare setting, patients, caregivers and the public. One guideline was translated from French to English while the remaining guidelines were published in English.

Issuing GPS according to guideline characteristics and statement topic

Figure 2 presents the associations between issuing GPS based on the guideline organisation, field, region, and recommendation topic. Guidelines published in the field of clinical practice were less likely to publish statements that qualify as GPS as compared with formal/informal recommendations, while guidelines in health systems and public health were more likely. Guidelines published by WHO, CDC, PHAC, ECDC and SIGN were more likely to issue statements as GPS with varying strengths of association. GPS were more frequently issued in guidelines published for European-Central Asian use (OR 2.01, 95% C.I 1.54 to 2.62). In contrast, guidelines published for global and North American use were less likely to issue statements as GPS. Issuing GPS was more common in statements regarding infection control (OR 1.63, 95% C.I 1.37 to 1.93), planning and monitoring (OR 1.32, 95% C.I 1.03 to 1.71) and health services and systems (OR 3.05, 95% C.I 2.30 to 4.05). Statements considering diagnosis (OR 0.40, 95% C.I 0.27 to 0.61), treatment and rehabilitation (OR 0.16, 95% C.I 0.12 to 0.20) and screening (OR 0.32, 95% C.I 0.22 to 0.47) were less likely to be issued as GPS. Statements concerning vaccination were also associated with being issued as GPS (OR 1.24, 95% C.I 1.00 to 1.53).

Evaluation of development process of the GPS

Only 27/2375 (1%) of the identified statements that qualified as GPS were actually labelled as GPS by the guideline developers. Of those, 23/27 (85%) statements satisfied all the GPS criteria (ii–v) with implicit and explicit rationales for development. ‘Clear and actionable’ was judged as ‘yes’ in 89%, 2% were judged as ‘probably yes’ and 3.7% were judged as ‘probably no’ (figure 3). For the criterion ‘necessity of the message for healthcare’, 63% of the GPS were judged as ‘yes’ and 37% were judged as ‘probably yes’. Eleven per cent of those GPS were judged as ‘yes’ for the criterion relating to net positive consequences from implementing the statement, while 82% were judged as ‘probably yes’. For the criterion relating to usefulness of collection and summarisation of evidence, 4% of the GPS were judged as ‘yes’, 82% as ‘probably yes’ and 15% as ‘probably no’. Fifty-six per cent provided an explicit statement explaining the chain of indirect evidence supporting the development of the GPS and were judged as ‘yes’ for this criterion. Judgements ‘probably yes’ was assigned to 56% of the GPS for this criterion.

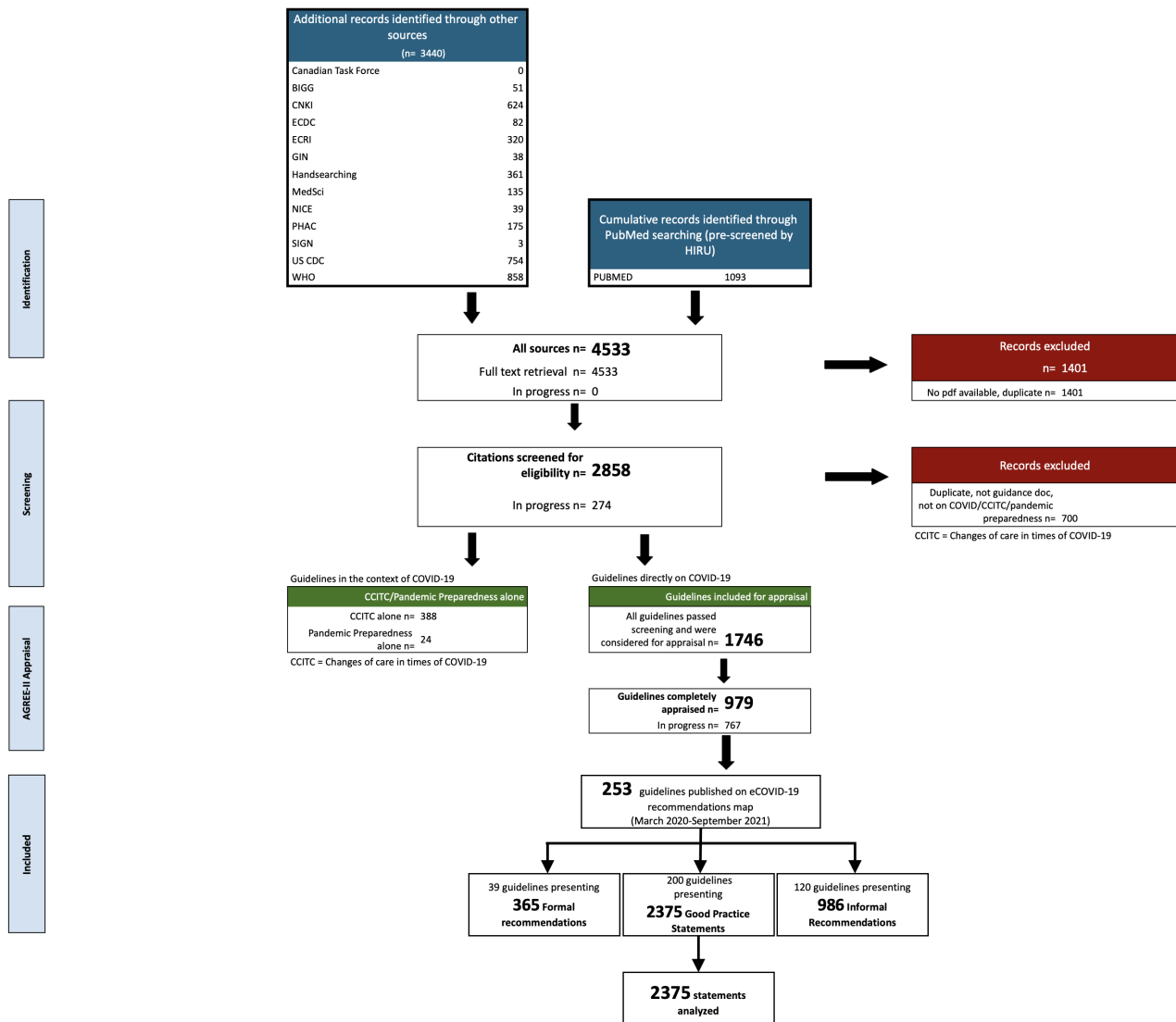


Figure 1 PRISMA chart for guidelines eligible for the eCOVID-19RecMap. BIGG, International Database of Grade Guidelines; CCITC, Changes of Care in Times of COVID-19; CDC, Centers for Disease Control and Prevention; ECDC, European Centres for Disease Control and Prevention; GIN, Guidelines International Network, NICE, National Institute for Health and Care Excellence; PHAC, Public Health Agency of Canada; SIGN, Scottish Intercollegiate Guidelines Network; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses

The reporting of implicit or explicit rationales supporting the development of statements that qualified as GPS (n=2348) was generally similar to those statements labelled as GPS by guideline developers. Of those, 2205/2348 (94%) statements satisfied all the GPS criteria (ii–v) with implicit and explicit rationales. Notable differences in proportion of statements supported with an explicit rationale were found for criteria ‘statement leads to large net positive consequence’ and ‘summarising evidence is a poor use of a guideline development group’s time’, with more frequent reporting for statements reported as GPS. In contrast, explicit rationales explaining the chain of indirect evidence supporting the development of the GPS was more common for statements not reported as GPS, compared with statements reported as GPS (56% vs 39%, respectively).

Quality of guidelines reporting GPS

The AGREE II evaluation of the six guidelines reporting statements labelled as GPS based on the three domains of interest showed that the overall quality of these guidelines was limited; none of

the guidelines scored over 60% for all three domains. Figure 4 shows that the six guidelines with labelled GPS scored a median of 81% (IQR 64–85) in the domain ‘Scope and purpose’, but only 9.4%, (IQR, 8.3–27 for the domain ‘methodological rigour’ and 0% (IQR) 0–0) for the domain ‘editorial independence’. The 194 guidelines reporting statements that qualified as GPS scored similarly. Two of those guidelines scored over 60% for all three domains.

Discussion

Our evaluation of COVID-19 recommendations using a novel classification that anatomises guidelines into actionable statements² shows that guideline developers include advice that frequently qualifies as GPS, (64% of our eligible statements of which 94% satisfied all the GPS criteria ii–v with implicit and explicit rationales) although developers rarely label them as GPS. Accordingly, the evaluation of GPS development processes proved challenging. Statements were more likely to be issued as GPS in European-Central Asia guidelines in the field of public health, specifically statements concerning infection control, planning and monitoring

Table 3 Improving the good practice statement evaluation framework

Evaluation questions	Explanation and signalling questions	Judgement
Is collecting and summarising the evidence a poor use of a guideline panel's limited time and energy (opportunity cost is large)?	<ul style="list-style-type: none"> ▶ Would the investigation of the effect of the intervention result only in high certainty indirect evidence? that is, cannot directly investigate the effect of the intervention by comparing to the alternative of the intervention as it would not be sensible/ethical? <i>Answer 'Yes'</i> ▶ Does the evaluator believe that the alternative of the intervention is highly unlikely to be chosen due to ethical and human right issues? <i>Answer 'Probably yes'</i> 	Y/PY/PN/N
Is the message really necessary in regard to actual healthcare practice?	<ul style="list-style-type: none"> ▶ Do the authors provide a rationale in the text of the guideline to why this message is necessary? <i>Answer 'Yes'</i> ▶ Does the evaluator believe that the statement is relevant to healthcare practice? <i>Answer 'Probably yes'</i> 	Y/PY/PN/N
After consideration of all relevant outcomes and potential downstream consequences, does implementing the good practice statement likely results in a large net positive consequence?	<ul style="list-style-type: none"> ▶ Is there any information referenced that the implementation of the good practice statement would have a net positive impact on health outcomes, as well as on relevant Evidence to Decision criteria (eg, equity)? <i>Answer 'Yes'</i> ▶ Does the evaluator believe that the implementation of the good practice statement would have a net positive impact on health outcomes, as well as on relevant Evidence to Decision) criteria? <i>Answer 'Probably yes'</i> 	Y/PY/PN/N
Is there a well-documented clear and explicit rationale connecting the indirect evidence?	<ul style="list-style-type: none"> ▶ Is there a description in the guideline text of the chain of linked indirect evidence, used to infer the net desirable consequences (mainly large health benefits) on the implementation of the good practice statement? <i>Answer 'yes'</i> ▶ Does the evaluator believe that there is a chain of linked indirect evidence that can infer the net desirable consequences (mainly large health benefits) on the implementation of the good practice statement? <i>Answer 'Probably yes'</i> 	Y/PY/PN/N
Is the statement clear and actionable?	<ul style="list-style-type: none"> ▶ Does the statement specify what actions are needed while specifying population or setting in the standard PIC format? <i>Answer 'Yes'</i> ▶ Does the statement specify what action is needed while specifying population or setting but not in the standard PIC format? <i>Answer 'Probably yes'</i> 	Y/PY/PN/N

Outcome is not relevant for the actionable statement as not all outcomes can be addressed in an actionable statement. Outcomes are also not typically part of a recommendation. PIC, Population, Intervention, Comparator.

and health systems. We found only a few GPS that were supported by rationales for their development regardless of how the guideline developers labelled them. Overall, the quality of most guidelines including formal and informal recommendations was poor and, similar to GPS, the recommendations were often not supported by rationales for their development. Particularly, the reported editorial independence of the guidelines was very low, which could question their trustworthiness. Guidelines to overcome the COVID-19 pandemic would serve healthcare professionals and services better if included GPS were clearly identified and developed through an explicit process. If GPSs are not transparently reported by developers, it is likely that they can be misinterpreted. Thus, in the accompanying article²⁰, we provide operationalised and structured implementation of GRADE guidance for the development of GPS. Our findings suggest that significant changes are

needed in the way guideline developers conduct GPS development. The high prevalence of GPS may be explained by the uncertainty and rapid spread of COVID-19, leading to a lack of direct evidence and immediate need for guidance, reducing the rigour of the guideline development process.

Our evaluation shows that the most poorly described criteria were the net consequences of implementing the statement and the usefulness of summarising and collecting the evidence. For the former, many rationales are presumed to be 'straightforward' and based on general knowledge, hence guideline developers may have been reluctant to document this rationale for each statement. For example, in statements regarding infection control (approximately 50% of the statements), the interventions aim to prevent transmission. Although net consequences are not often stated, it is implicitly clear that new cases (and deaths) might be prevented. However, for the latter criterion, the judgement rests on the belief of a guideline panel that they have high confidence in the indirect evidence. A formal documentation is needed to ensure that these statements should truly be issued.

Strengths and limitations

The strengths of this study include the first systematic evaluation of a large sample of COVID-19 GPS irrespective of language, topic, publication source or date of development. We used criteria previously proposed by the GRADE Working Group for GPS but created explanations and signalling questions in addition to response options, which allowed us to differentiate between statements explicitly or implicitly supported by a proper rationale (table 2). All judgements were conducted in duplicate and reviewed by an expert in guideline development after developing guidance for this approach.

Our work has several limitations. First, we did not assess if statements GRADEd as low or very low certainty were GPS rather than formal recommendations. It has been shown that GPS are often incorrectly GRADEd,^{12 18} therefore, despite their abundance in COVID-19 guidelines, the actual proportion of GPS may be even higher. Second, despite the use of the most recent version of each guideline, this evaluation is limited by its cross-sectional nature. Temporal changes in the quality of GPS can be assessed in the future as more updated versions of guidelines and recommendations become available. Third, this is the first time this approach to identifying GPS is used and, despite

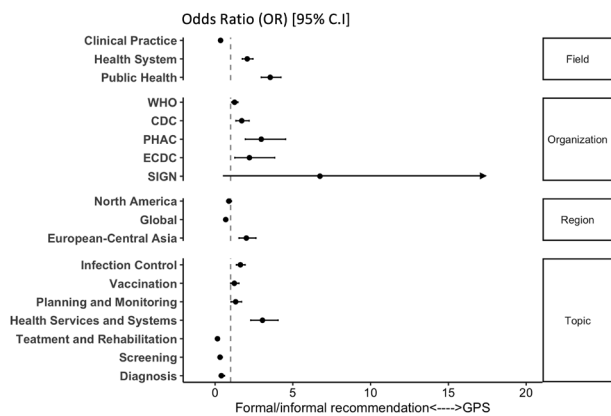


Figure 2 Association of guideline and statement characteristics with issuing statements that qualify as good practice statements. Reference was issuing actionable statements other than good practice statements. Dashed line corresponds to univariate OR of 1.00. We were not able to evaluate associations for guideline regions: South Asia and East Asian Pacific and NICE guideline organisation with issuing good practice statements due to absence of other types of statements. CDC, Centers for Disease Control and Prevention; ECDC, European Centres for Disease Control and Prevention; GPS, good practice statement; NICE, National Institute for Health and Care Excellence; PHAC, Public Health Agency of Canada; SIGN, Scottish Intercollegiate Guideline Network.

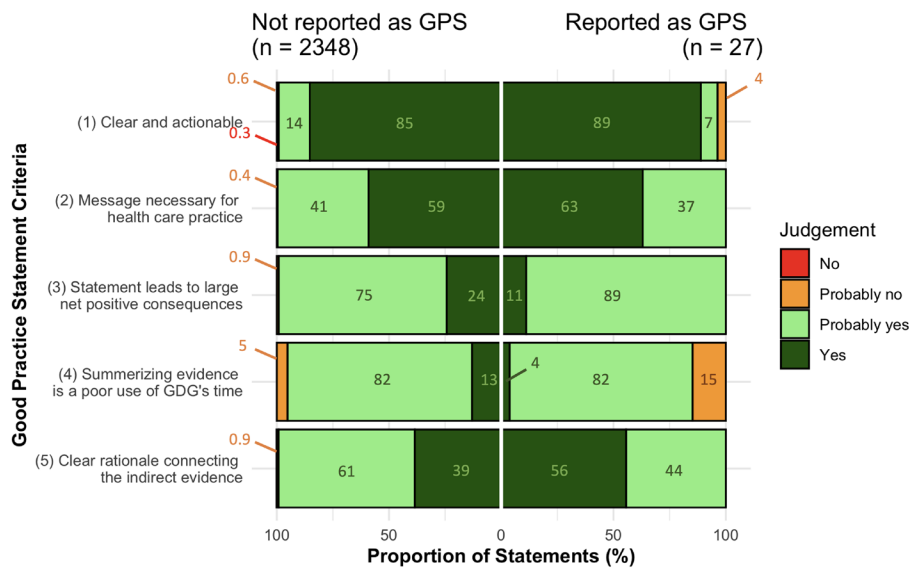


Figure 3 Distribution of judgements for good practice statement (GPS) criteria. Annotations correspond to percentage of statements with their respective judgement. GDG, guideline development group.

face validity using established criteria⁸ and the rigorous methods applied (eg, duplicate judgements by extensively trained raters and validated by experts in guideline development), further validation is required. Fourth, our assessment depended on the completeness of reporting in the guidelines and not necessarily the guideline conduct or methods. Fifth, we acknowledge that the nature of the judgement is contingent on a judgement informed by the expertise and knowledge of the evaluator, which may have been variable. To increase confidence, all judgements were completed by two trained reviewers and verified by an expert in guideline development to validate the decisions methodologically. Our multidisciplinary team also includes content experts of various clinical knowledge who were engaged when needed.

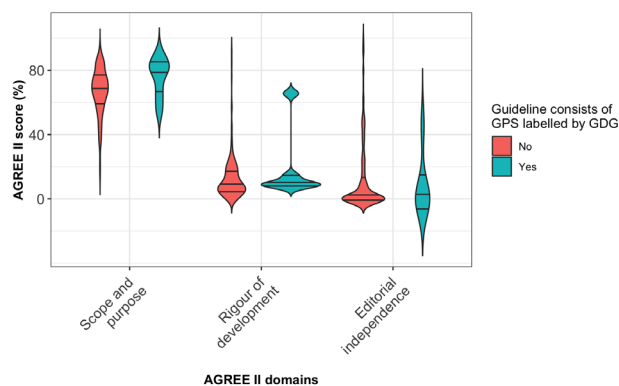


Figure 4 AGREE II assessment (three domains) of guidelines stratified by labelling of good practice statements by guideline developers. Guidelines containing statements labelled by guideline developers as GPS (n=6) and guidelines containing statements that qualify as GPS (n=194). The thickness of the plot represents the kernel density estimation to show the distribution shape of the data. The three lines represent the median and lower (25%) and upper (75%) quartiles based on density estimates. Wider sections of the plot represent a higher probability that guidelines will take on the given value; the slimmer sections represent a lower probability. AGREE, Appraisal of Guidelines for Research and Evaluation; GDG, guideline development group; GPS, good practice statement.

Comparison with other work

Previous work reported that GPS are commonly issued in non-COVID-19 guidelines.^{12 18} A retrospective evaluation of discordant recommendations (low or very low confidence in the estimate of effect) in WHO guidelines identified 29 (18%) as GPS. Similarly, a study produced by the Endocrine Society found 43 (35.6%) of discordant statements were GPS, further indicating that GPS are prone to misjudgement.^{12 18} Our findings show that GPS are prevalent in guidelines and may be even more commonly used during public health emergencies. The COVID-19 crisis may have impacted developers' ability and capacity to produce more rigorous guidance, forcing them to balance methodological rigour with speed.

Implications for guideline users and developers

First, our study shows that guideline developers should explicitly report the use of GPS in the guideline development process. When not explicitly labelled, two approaches using signalling questions on whether a GPS is justified for development were proposed in prior work.⁸ The first involves identifying that the alternative of the statement is absurd or does not conform with ethical norms. The phrasing of the statement may present a source of confusion when identifying the alternative. Hence, may be unreliable when identifying GPS. The second method involves acknowledging that the collection of high-certainty indirect evidence to review and support the statement would be a time-consuming process (criterion iv: summarisation of evidence would be poor use of guideline panel's time). The latter method requires more expertise and familiarity with the field of the statement. In turn, users can assess if GPS were appropriately developed using our methodology.

Second, most of the guidelines were produced for global use but guidelines developed in regions other than high income countries (North America and Europe) were scarce. Thus, implementing the GPS in other settings, especially in low-income settings, may not be feasible. For example, GPS recommending increasing surveillance for farm workers and their close contacts or maintaining humidity level indoors

between 30% and 50% is heavily dependent on resources and influenced by organisational aspects.

Third, adherence to our updated guidance for the operationalisation and implementation of GPS development²⁰ may improve the transparency in the process of developing and reporting of GPS and help direct guideline developers' resources and efforts to what is needed and avoid the inappropriate issuing of GPS. For example, the European Commission Initiative of Breast Cancer Guidelines on Breast Cancer Screening and Diagnosis²¹ reported their GPS in a supplementary document and provided detailed descriptions of the rationales supporting them.

Implications for research

We evaluated the GPS primarily through information provided in the guideline and judgement of the evaluators. Our evaluation of COVID-19 GPS using the previously published five criteria for GPS provided us with insight that improvements to the GPS framework are required to ensure reproducible and valid future evaluations of GPS. Our suggested framework for evaluating GPS builds on our incorporation of judgements with response options that we applied in our evaluation. We also provide a specific order, explanations and signalling questions for using the criteria for GPS evaluation (table 2). For example, the assessment if the statement is actionable and clear was placed at the end of the evaluation as it is not specific to GPS and does not impact on the appropriateness of the rationale for its development. Furthermore, it is not specific to GPS, but is relevant for all actionable statements. We found that using the criterion summarising evidence would be poor use of guideline panel's time as the first criterion for the evaluation, helps with differentiating the GPS from other types of actionable statements although is sometimes a difficult judgement to make. Further testing of this framework by other research teams is required, along with specific GRADE guidance for the development and evaluation of GPS.

Conclusions

The large number of GPS in COVID-19 guidelines emphasises their importance in guidelines especially during public health emergencies, when there is a need for urgent guidance and there is a lack of direct evidence to inform decision making. Our evaluation shows that improvements are needed in the presentation, transparent reporting and the rationale for GPS development beyond the existing GRADE guidance. Furthermore, we need studies to monitor the progress around GPS development and evaluate potential barriers slowing the uptake of available guidance by guideline developers.

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Process for developing good practice statement	Supporting information	Verification																				
<i>Write Good Practice Statement</i>																						
<i>Does the statement follow a PICO prioritization process?</i>		<input type="radio"/> Yes <input type="radio"/> No																				
If you answered No → 1) Explain why the PICO question was not prioritized but is being addressed → avoid developing any type of actionable statement that acts as an independent response to the PICO question.																						
<i>Are the Population and Intervention components clear?</i>		<input type="radio"/> Yes <input type="radio"/> No																				
If you answered No → Check whether you are developing an implementation consideration (refer to flow chart in Lotfi et al.(8))																						
Items to complete	Supporting information	Verification																				
<i>All the following criteria must be fulfilled to consider the statement a GPS.</i>																						
(1) Message is really necessary in regard to actual health care practice		This criterion has been addressed: <input type="radio"/> Yes <input type="radio"/> No																				
(2) Implementing the GPS results in a large net positive consequence (i.e. satisfy several evidence to decision (EtD) criteria) after consideration of all relevant outcomes and potential downstream consequences ** check the criteria considered in the development of the GPS.		This criterion has been addressed: <input type="radio"/> Yes <input type="radio"/> No <table border="1"> <thead> <tr> <th colspan="2">Evidence-to-Decision criteria</th> </tr> </thead> <tbody> <tr> <td>Importance of the problem</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Certainty in effects</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Variability and certainty in the importance of outcomes</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Magnitude of resource requirements</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Certainty of evidence of resource use</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Cost-effectiveness</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Equity</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Acceptability</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Feasibility</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	Evidence-to-Decision criteria		Importance of the problem	<input type="checkbox"/>	Certainty in effects	<input type="checkbox"/>	Variability and certainty in the importance of outcomes	<input type="checkbox"/>	Magnitude of resource requirements	<input type="checkbox"/>	Certainty of evidence of resource use	<input type="checkbox"/>	Cost-effectiveness	<input type="checkbox"/>	Equity	<input type="checkbox"/>	Acceptability	<input type="checkbox"/>	Feasibility	<input type="checkbox"/>
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Cost-effectiveness	<input type="checkbox"/>																					
Equity	<input type="checkbox"/>																					
Acceptability	<input type="checkbox"/>																					
Feasibility	<input type="checkbox"/>																					
(3) Collecting and summarizing the evidence is a poor use of a guideline panel's limited time, energy or resources. The opportunity cost of collecting and summarizing the evidence is large and can be avoided.		This criterion has been addressed: <input type="radio"/> Yes <input type="radio"/> No																				
(4) There is a well-documented clear and explicit rationale connecting the indirect evidence		This criterion has been addressed: <input type="radio"/> Yes <input type="radio"/> No																				
(5) Clear and actionable (This criterion should apply to any developed statement. For example, all formal recommendations are clear and actionable)		This criterion has been addressed: <input type="radio"/> Yes <input type="radio"/> No																				
<i>Final judgement</i>																						
Did you answer Yes to all of the above?	<input type="radio"/> Yes Development as GPS is appropriate																					
	<input type="radio"/> No Development as GPS is not appropriate → Revisit the PICO question and the importance of addressing it.																					

Supplementary

Supplementary Table S1: Definitions of guidelines and actionable statements used in the eCOVID-19RecMap “Created by authors”

Nomenclature	Definition
Clinical guidelines	<p>“systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances” (24)</p> <p>“Healthcare guidelines are statements that include recommendations intended to optimise healthcare, whether at the clinical, public health or health policy levels. They should be informed by a systematic review of evidence and an assessment of the desirable and undesirable consequences of alternative care options” (25)</p>
Formal recommendation	<p>“A formal recommendation is an actionable statement about the choice between two or more management or policy options (interventions) in a specific population and, if relevant, in a specific setting. Alternative option(s) (i.e. comparator(s)) should be specified in the recommendation if they are not self-evident. These statements are the results of a formal deliberation process, and contain an explicit and direct link to the bodies of evidence resulting from a systematic literature search and appraisal process.”(2)</p> <p>Example: “The Canadian Rheumatology Association guideline panel suggests using COVID-19 vaccination over no COVID-19 vaccination in persons with AIRD (conditional recommendation, low certainty of the evidence)”</p> <p>From <i>CRA Recommendation on Covid-19 Vaccination in Persons with Autoimmune Rheumatic Disease</i></p>
Informal recommendation	<p>“An informal recommendation is an actionable statement about the choice of one or more intervention options in a specific population and, if relevant, in a specific setting. These statements were not issued following a formal deliberative process, do not directly link to the bodies of evidence assembled for the guideline, and do not fulfill the rigorous set of logical rules identifying good practice statements.” (2)</p> <p>Example: “In patients with PIMS-TS and thromboembolism or suspected deep vein thrombosis, administer enoxaparin at a dose of 1 mg/kg every 12 h delivered subcutaneously.”</p> <p>From <i>Maintaining a safe and adequate blood supply and collecting convalescent plasma in the context of the COVID-19 pandemic: interim guidance, 17 February 2021</i></p>
Good Practice Statement	<p>“Good practice statements are necessary actionable and clear guideline statements. They describe the population and intervention options and, if appropriate, comparator components of the recommendation.” (2)</p> <p>Example: “For personnel working with untreated sewage for which there are considerable infectious risks, standard PPE should be worn (protective outerwear, heavy-duty gloves, boots, masks, goggles or a face shield).”</p>

	From <i>Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19: interim guidance, 29 July 2020</i>
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GRADEproGDT COVID-19 Extraction Form

Should [intervention] vs [comparison] be used for [health problem and/or population]?

Good practice statement

Clear and actionable

The message is necessary in regard to actual health care practice

After consideration of all relevant outcomes and potential downstream consequences, implementing the good practice statement results in a large net positive consequences

Collecting and summarizing the evidence is a poor use of the guideline panel's limited time and energy (opportunity cost is large)

There is a well-documented clear and explicit rationale connecting the indirect evidence

Buttons: Add recommendation number, No, Probably yes, Probably no, No

Supplementary Figure S1. Template of Good Practice Statement extraction form. “Created by authors”

Supplementary Table S1. Eligible COVID-19 guidelines “Created by authors”

Guideline name	Source	Include good practice statements
1563 - Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines: interim guidance	World Health Organization (WHO);United Nations International Children's Fund (UNICEF)	Yes
A Regional Canadian Expert Consensus on recommendations for restoring exercise and pulmonary function testing in low and moderate-high community COVID-19 prevalence settings	Regional Canadian Expert Consensus	Yes
Acceptance and demand for COVID-19 vaccines: Interim guidance, 31 January 2021	World Health Organization (WHO)	No
Actions for consideration in the care and protection of vulnerable population groups for COVID-19	World Health Organization (WHO)	No
Addressing noncommunicable diseases in the COVID-19 response	World Health Organization (WHO)	Yes
Advice on the use of point-of-care immunodiagnostic tests for COVID-19: scientific brief, 8 April 2020	World Health Organization (WHO)	No
Algorithm for COVID-19 triage and referral : patient triage and referral for resource-limited settings during community transmission	World Health Organization (WHO)	Yes
Algorithms for testing COVID-19 focused on use of RT-PCR and high-affinity serological testing: a consensus statement from a panel of Latin American experts	International Journal of Infectious Diseases	No
American College of Rheumatology Clinical Guidance for Pediatric Patients with Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with SARS-CoV-2 and Hyperinflammation in COVID-19. Version 2	American College of Rheumatology	No
Analysing and using routine data to monitor the effects of COVID-19 on essential health services: practical guide for national and subnational decision-makers	World Health Organization (WHO)	Yes
Antigen-detection in the diagnosis of SARS-CoV-2 infection using rapid immunoassays	World Health Organization (WHO)	No
At home: Using ventilation and filtration to reduce the risk of aerosol transmission of COVID-19	Public Health Agency of Canada (PHAC)	Yes

Australian guidelines for the clinical care of people with COVID-19 (version 37.1) ***See source document link for most recent version (coming to covid.gradepro.org soon!)	Australian National COVID-19 Clinical Evidence Taskforce	No
Bacille Calmette-Guérin (BCG) vaccination and COVID-19	World Health Organization (WHO)	No
Calibrating long-term non-pharmaceutical interventions for COVID-19 : principles and facilitation tools	World Health Organization (WHO)	Yes
Canadian Rheumatology Association Position Statement on COVID-19 Vaccination	Canadian Rheumatology Association (CRA)	No
Cardio-Oncology care in the era of the coronavirus disease 2019 (COVID-19) pandemic: An International Cardio-Oncology Society (ICOS) statement	International Cardio-Oncology Society (ICOS)	Yes
Care for Breastfeeding Women. Interim guidance on breastfeeding and breast milk feeds in the context of COVID-19	Centers for Disease Control and Prevention (CDC)	Yes
Cleaning and Disinfecting Your Facility - Every Day and When Someone is Sick	Centers for Disease Control and Prevention (CDC)	Yes
Cleaning and disinfection of environmental surfaces in the context of COVID-19	World Health Organization (WHO)	Yes
Cleaning, disinfection and hand hygiene in schools, A Toolkit for School Administrators.	Centers for Disease Control and Prevention (CDC)	Yes
Clinical management of severe acute respiratory infection (SARI), when COVID-19 disease is suspected: interim guidance, 13 March 2020	World Health Organization (WHO)	Yes
Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic	World Health Organization (WHO)	No
Conducting community engagement for COVID-19 vaccines: interim guidance, 31 January 2021	World Health Organization (WHO)	Yes
Considerations for Case Investigation and Contact Tracing in K-12 Schools and Institutions of Higher Education (IHEs)	Centers for Disease Control and Prevention (CDC)	Yes
Considerations for forming a regional COVID-19 review committee (RRC), technical brief, 29 January 2021	World Health Organization (WHO)	Yes
Considerations for implementing a risk-based approach to international travel in the context	World Health Organization (WHO)	Yes

of COVID-19: interim guidance, 16 December 2020		
Considerations for implementing and adjusting public health and social measures in the context of COVID-19: interim guidance, 4 November 2020	World Health Organization (WHO)	Yes
Considerations for implementing mass treatment, active case-finding and population-based surveys for neglected tropical diseases in the context of the COVID-19 pandemic	World Health Organization (WHO)	Yes
Considerations for Inpatient Obstetric Healthcare Settings	Centers for Disease Control and Prevention (CDC)	Yes
Considerations for Institutions of Higher Education	Centers for Disease Control and Prevention (CDC)	Yes
Considerations for quarantine of contacts of COVID-19 cases: interim guidance	World Health Organization (WHO)	Yes
Considerations for school-related public health measures in the context of COVID-19	World Health Organization (WHO)	Yes
Considerations in the investigation of cases and clusters of COVID-19: interim guidance, 22 October 2020	World Health Organization (WHO)	Yes
Considerations to relax border restrictions in the Western Pacific Region	World Health Organization (WHO)	Yes
Contact tracing in the context of COVID-19: interim guidance, 1 February 2021	World Health Organization (WHO)	Yes
Contact tracing: public health management of persons, including healthcare workers, who have had contact with COVID-19 cases in the European Union third update	European Centre for Disease Prevention and Control (ECDC)	Yes
Continuing essential sexual reproductive, maternal, neonatal, child and adolescent health services during COVID-19 pandemic: practical considerations	World Health Organization (WHO)	Yes
Controlling the spread of COVID-19 at ground crossings	World Health Organization (WHO)	Yes
Coronavirus disease 2019 (COVID-19) and supply of substances of human origin in the EU/EEA - second update	European Centre for Disease Prevention and Control (ECDC)	Yes
Coronavirus Disease 2019 (COVID-19) Treatment Guidelines (January 21, 2021 version) ***Most recent version coming soon to covid.gradepro.org; in meantime see source document URL)	National Institutes of Health (NIH)	Yes

COVID-19 and food safety: guidance for food businesses: interim guidance, 07 April 2020	World Health Organization (WHO)	Yes
COVID-19 and mandatory vaccination: ethical considerations and caveats: policy brief, 13 April 2021	World Health Organization (WHO)	No
COVID-19 and schools: Guidelines of the French Pediatric Society	French Pediatric Society	Yes
COVID-19 and Thrombotic or Thromboembolic Disease: Implications for Prevention, Antithrombotic Therapy, and Follow-Up	Journal of the American College of Cardiology	No
COVID-19 Clinical Management	World Health Organization (WHO)	Yes
COVID-19 Critical Infrastructure Sector Response Planning	Centers for Disease Control and Prevention (CDC)	Yes
COVID-19 global risk communication and community engagement strategy	World Health Organization (WHO)	Yes
COVID-19 guidance for schools Kindergarten to Grade 12	Public Health Agency of Canada (PHAC)	Yes
COVID-19 impact on perinatal care: risk factors, clinical manifestation and prophylaxis. Polish experts,Äö opinion for December 2020		Yes
COVID-19 management in hotels and other entities of the accommodation sector: interim guidance, 25 August 2020	World Health Organization (WHO)	No
COVID-19 Overview and Infection Prevention and Control Priorities in non-US Healthcare Settings	Centers for Disease Control and Prevention (CDC)	Yes
COVID-19 position statement: Presentations and management of COVID-19 in older people in acute care	Scottish Intercollegiate Guidelines Network (SIGN)	Yes
COVID-19 position statement: the prevention and management of thromboembolism in hospitalised patients with COVID-19-related disease.		Yes
COVID-19 Rail Protocol: Recommendations for safe resumption of railway services in Europe	European Union Agency,Äös for Railways (ERA);European Commission;European Centre for Disease Prevention and Control (ECDC)	Yes
COVID-19 rapid guideline: gastrointestinal and liver conditions treated with drugs affecting the immune response	National Institute for Health and Care Excellence (NICE)	No
COVID-19 rapid guideline: interstitial lung disease ***update coming soon!***	National Institute for Health and Care Excellence (NICE)	Yes
COVID-19 rapid guideline: Managing the long-term effects of COVID-19	National Institute for Health and Care Excellence (NICE);Scottish Intercollegiate Guidelines Network (SIGN);Royal College of General Practitioners	Yes

COVID-19 Response Plan for the safe and sustainable reopening of Post Primary Schools	Department of Education, Government of Ireland	Yes
COVID-19 strategic preparedness and response plan: operational planning guideline: 1 February 2021 to 31 January 2022	World Health Organization (WHO)	No
COVID-19 support mission to Turkmenistan, 6, 16 July 2020	World Health Organization (WHO)	Yes
COVID-19 technical mission of experts to Tajikistan: 1, 11 May 2020	World Health Organization (WHO)	No
COVID-19 vaccination: supply and logistics guidance: interim guidance, 12 February 2021	World Health Organization (WHO); United Nations International Children's Emergency Fund (UNICEF)	Yes
COVID-19 vaccines: safety surveillance manual	World Health Organization (WHO)	Yes
COVID-19 Variant of Concern: Case, Contact and Outbreak Management Interim Guidance (version 2.0)	Ontario Ministry of Health and Long-Term Care	Yes
COVID-19: an informative guide: advice for journalists	World Health Organization (WHO)	Yes
COVID-19: Guidance on indoor ventilation during the pandemic	Public Health Agency of Canada (PHAC)	Yes
COVID-19: occupational health and safety for health workers: interim guidance, 2 February 2021	World Health Organization (WHO)	Yes
COVID-19 strategy update (as of 14 April 2020), Mise à jour de la stratégie COVID-19 (au 14 avril 2020)	World Health Organization (WHO)	Yes
CRA Recommendation on Covid-19 Vaccination in Persons with Autoimmune Rheumatic Disease	Canadian Rheumatology Association (CRA)	No
Critical preparedness, readiness and response actions for COVID-19: interim guidance, 27 May 2021	World Health Organization (WHO)	Yes
Current Recommendations for the Management of Stroke Patients in the Middle East in the Era of COVID-19 Pandemic; Statement from the MENA SINO	Middle East and North Africa Stroke and Interventional Neurotherapies Organization (MENA-SINO)	Yes
Data for action: achieving high uptake of COVID-19 vaccines: gathering and using data on the behavioural and social drivers of vaccination: a guidebook for immunization programmes and implementing partners: interim guidance, 1 April 2021	World Health Organization (WHO)	Yes

Detection of new SARS-CoV-2 variants related to mink	European Centre for Disease Prevention and Control (ECDC)	Yes
Diagnostic testing for SARS-CoV-2: interim guidance, 11 September 2020	World Health Organization (WHO)	Yes
Disability considerations for COVID-19 vaccination: WHO and UNICEF policy brief, 19 April 2021	World Health Organization (WHO); United Nations International Children's Emergency Fund (UNICEF)	Yes
Disaster evacuation shelters in the context of COVID-19	World Health Organization (WHO)	Yes
EAACI statement on the diagnosis, management and prevention of severe allergic reactions to COVID-19 vaccines	European Academy of Allergy and Clinical Immunology (EAACI)	No
Effectiveness of different forms of oxygen therapy for COVID-19 management	World Health Organization (WHO)	Yes
Establishing integrated nationwide contact tracing systems	World Health Organization (WHO)	Yes
Estimating COVID-19 vaccine effectiveness against severe acute respiratory infections (SARI) hospitalisations associated with laboratory-confirmed SARS-CoV-2: an evaluation using the test-negative design: guidance document	World Health Organization (WHO)	Yes
EULAR points to consider on pathophysiology and use of immunomodulatory therapies in COVID-19	European League Against Rheumatism (EULAR)	No
European Technical Advisory Group of Experts on Immunization (ETAGE) interim recommendations, June 2021 Inclusion of adolescents aged 12-15 years in national COVID-19 vaccination programmes	World Health Organization	Yes
Evaluating COVID-19 disease transmission and public health measures in schools: Outbreak investigation guidance	Public Health Agency of Canada (PHAC)	Yes
Evaluation of COVID-19 vaccine effectiveness: interim guidance, 17 March 2021	World Health Organization (WHO)	No
Evidence review - Public health measures in the aviation sector in the context of COVID-19: quarantine and isolation (21 May 2021), Examen des données factuelles - Mesures de santé publique dans le secteur du transport aérien dans le contexte de la COVID-19: quarantaine et isolement (21 mai 2021)	World Health Organization (WHO)	No

Exploration of COVID-19 health-care worker cases : implications for action	World Health Organization (WHO)	Yes
Fabry disease and COVID-19: international expert recommendations for management based on real-world experience	Clinical Kidney Journal	Yes
Federal safety guidance to protect drivers and limit the spread of COVID-19 in commercial vehicle operations	Public Health Agency of Canada (PHAC)	Yes
For immunization providers: Interim national vaccine storage, handling and transportation guidelines for ultra-low temperature and frozen temperature COVID-19 vaccines	Public Health Agency of Canada (PHAC)	Yes
Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19	World Health Organization (WHO)	Yes
Framework for reopening schools	United Nations Educational, Scientific and Cultural Organization (UNESCO);United Nations International Children's Emergency Fund (UNICEF);World Bank;World Food Programme;United Nations High Commissioner for Refugees (UNHCR)	Yes
Guidance and Tips for Tribal Community Living During COVID-19	Centers for Disease Control and Prevention (CDC)	Yes
Guidance for contacts of people with confirmed coronavirus (COVID-19) infection who do not live with the person	Public Health England	Yes
Guidance for Institutions of Higher Education with Students Participating in International Travel or Study Abroad Programs	Centers for Disease Control and Prevention (CDC)	Yes
Guidance for K-12 School Administrators on the Use of Masks in Schools	Centers for Disease Control and Prevention (CDC)	No
Guidance for laboratories shipping specimens to WHO reference laboratories that provide confirmatory testing for COVID-19 virus: interim guidance, 31 March 2020	World Health Organization (WHO)	No
Guidance for Pharmacies. Guidance for Pharmacists and Pharmacy Technicians in Community Pharmacies during the COVID-19 Response	Centers for Disease Control and Prevention (CDC)	Yes
Guidance for post-secondary institutions during the COVID-19 pandemic.	Public Health Agency of Canada (PHAC)	Yes

Guidance for providers of services for people experiencing homelessness (in the context of COVID-19)	Public Health Agency of Canada (PHAC)	Yes
Guidance for Surveillance of SARS-CoV-2 Variants: Interim Guidance, 9 August 2021	World Health Organization	Yes
Guidance on COVID-19 for the care of older people and people living in long-term care facilities, other non-acute care facilities and home care	World Health Organization (WHO)	Yes
Guidance on the prioritization of initial doses of COVID-19 vaccine(s)	Public Health Agency of Canada (PHAC)	No
Guidance on the prioritization of key populations for COVID-19 immunization	Public Health Agency of Canada (PHAC)	No
Guidance on the use of influenza vaccine in the presence of COVID-19	Public Health Agency of Canada (PHAC)	Yes
Guidance on utilization of COVID-19 vaccines before the date of expiry, 19 July 2021	World Health Organization (WHO)	Yes
Guidelines for COVID-19 management in hematopoietic cell transplant and cellular therapy patients	American Society for Transplantation and Cellular Therapy	Yes
Guidelines for COVID-19 testing and quarantine of air travellers	European Centre for Disease Prevention and Control (ECDC)	Yes
Guidelines for the implementation of non-pharmaceutical interventions against COVID-19	European Centre for Disease Prevention and Control (ECDC)	Yes
Guidelines for the pharmacological treatment of COVID-19	Brazilian Association of Intensive Care Medicine;Brazilian Society of Infectious Diseases;Brazilian Society of Pulmonology and Tisiology	No
Guiding principles for immunization activities during the COVID-19 pandemic: interim guidance, 26 March 2020	World Health Organization (WHO)	Yes
Health workers in focus: policies and practices for successful public response to COVID-19 vaccination: strategic considerations for member states in the WHO European region	World Health Organization (WHO)	Yes
Home care for patients with suspected or confirmed COVID-19 and management of their contacts: interim guidance, 12 August 2020	World Health Organization (WHO)	Yes
How to Mitigate COVID-19 transmission in densely populated areas globally	Centers for Disease Control and Prevention (CDC)	Yes
Immunization and Vaccine-related Implementation Research Advisory Committee	World Health Organization (WHO)	Yes

(,ÄÉVIR-AC),ÄÉ ,Äí Comitv© consultatif sur la vaccination et la recherche sur la mise en œuvre des vaccins (,ÄÉVIR-AC),ÄÉ		
Implementing telemedicine services during COVID-19 : guiding principles and considerations for a stepwise approach	World Health Organization (WHO)	Yes
Indian Academy of Pediatrics Guidelines on School Reopening, Remote Learning and Curriculum in and After the COVID-19 Pandemic	Indian Academy of Pediatrics (IAP)	Yes
Indicators to monitor health-care capacity and utilization for decision-making on COVID-19	World Health Organization (WHO)	Yes
Infection prevention and control (IPC) principles and procedures for COVID-19 vaccination activities	World Health Organization (WHO)	Yes
Infection prevention and control during health care when coronavirus disease (,ÄÉCOVID-19),ÄÉ is suspected or confirmed	World Health Organization (WHO)	Yes
Infection prevention and control for the safe management of a dead body in the context of COVID-19: interim guidance, 4 September 2020	World Health Organization (WHO)	Yes
Infection prevention and control guidance for long-term care facilities in the context of COVID-19: interim guidance, 8 January 2021	World Health Organization (WHO)	Yes
Infection prevention and control in the household management of people with suspected or confirmed coronavirus disease (COVID-19)	European Centre for Disease Prevention and Control (ECDC)	Yes
Infection prevention guidelines and considerations for paediatric risk groups when reopening primary schools during COVID-19 pandemic, Norway, April 2020	Norwegian Institute of Public Health;European Public Health Microbiology Training Programme (EUPHEM);European Centre for Disease Prevention and Control (ECDC);Norwegian Directorate for Education and Training;Paediatric Research Group, Faculty of Health Sciences, University of TromsvT]-Arctic University of Norway;Department of Paediatrics and Adolescence Medicine, University Hospital of North Norway	Yes
Infection with SARS-CoV-2 in pregnancy. Update of Information and proposed care. CNGOF	French National College of French Obstetrician Gynaecologists	No

Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19	Infectious Diseases Society of America (IDSA)	No
Information note on HIV and COVID-19	World Health Organization (WHO)	Yes
Interim Clinical Commissioning Policy: Tocilizumab for critically ill patients with COVID-19 pneumonia (adults)	National Health Service (NHS)	No
Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States	Centers for Disease Control and Prevention (CDC)	Yes
Interim Considerations for Testing for K-12 School Administrators and Public Health Officials	Centers for Disease Control and Prevention (CDC)	Yes
Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19)	Centers for Disease Control and Prevention (CDC)	Yes
Interim Guidance for COVID-19 Prevention and Control in Schools	United Nations International Children's Emergency Fund (UNICEF); World Health Organization (WHO); International Federation of Red Cross and Red Crescent Societies (IFRC)	Yes
Interim guidance note for hospitals : managing hospital services, maintaining essential routine health care and generating surge capacity	World Health Organization (WHO)	No
Interim Guidance: Get Your Mass Gatherings or Large Community Events Ready for Coronavirus Disease 2019 (COVID-19)	Centers for Disease Control and Prevention (CDC)	Yes
Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic	Centers for Disease Control and Prevention (CDC)	Yes
Interim Public Health Recommendations for Fully Vaccinated People	Centers for Disease Control and Prevention (CDC)	Yes
Interim recommendations for the use of the Janssen Ad26.COV2.S (COVID-19) vaccine: interim guidance, 17 March 2021	World Health Organization (WHO)	Yes
Interim recommendations for use of the ChAdOx1-S [recombinant] vaccine against COVID-19 (AstraZeneca COVID-19 vaccine AZD1222, SII Covishield, SK Bioscience): interim guidance, first issued 10 February 2021, updated 21 April 2021	World Health Organization (WHO)	Yes
Interim recommendations for use of the inactivated COVID-19 vaccine BIBP developed	World Health Organization (WHO)	No

by China National Biotec Group (CNBG), Sinopharm: interim guidance, 7 May 2021		
Interim recommendations for use of the inactivated COVID-19 vaccine, CoronaVac, developed by Sinovac: interim guidance, 24 May 2021	World Health Organization (WHO)	Yes
Interim recommendations for use of the Moderna mRNA-1273 vaccine against COVID-19: interim guidance	World Health Organization (WHO)	Yes
Interim recommendations for use of the Pfizer, Æ BioNTech COVID-19 vaccine, BNT162b2, under Emergency Use Listing	World Health Organization (WHO)	Yes
ISTH interim guidance on recognition and management of coagulopathy in COVID-19	International Society on Thrombosis and Haemostasis (ISTH)	No
Key considerations for mass gatherings in the context of the COVID-19 outbreak in the Western Pacific Region	World Health Organization (WHO)	Yes
Laboratory biosafety guidance related to coronavirus disease (, Æ COVID-19), Æ: interim guidance, 28 January 2021	World Health Organization (WHO)	Yes
Laboratory testing strategy recommendations for COVID-19: interim guidance, 21 March 2020	World Health Organization (WHO)	Yes
Maintaining a safe and adequate blood supply and collecting convalescent plasma in the context of the COVID-19 pandemic: interim guidance, 17 February 2021	World Health Organization (WHO)	Yes
Maintaining surveillance of influenza and monitoring SARS-CoV-2: adapting Global Influenza Surveillance and Response System (, Æ GISRS), Æ and sentinel systems during the COVID-19 pandemic: interim guidance, 8 November 2020	World Health Organization (WHO)	Yes
Management of COVID, Æ associated coagulopathy in persons with haemophilia	Coagulation Products Safety, Supply and Access (CPSSA) Committee of the World Federation of Hemophilia	No
Management of ill travellers at Points of Entry (international airports, seaports, and ground crossings) in the context of COVID-19	World Health Organization (WHO)	Yes
Management of severe / critical cases of COVID-19 with non-invasive or mechanical	World Health Organization (WHO)	Yes

ventilation: based on information as at 1st June 2020		
Managing haematology and oncology patients during the COVID-19 pandemic: interim consensus guidance	Australasian Leukaemia and Lymphoma Group; National Centre for Infections in Cancer	Yes
Mask use in the context of COVID-19	World Health Organization (WHO)	No
Media toolkit to prevent and address stigma associated with the migrant population in Malaysia in response to COVID-19	World Health Organization (WHO)	Yes
Mental health and psychosocial support aspects of the COVID-19 response	World Health Organization (WHO)	No
Methods for the detection and identification of SARS-CoV-2 variants, March 2021	World Health Organization (WHO)	Yes
Mitigating the Impact of Coronavirus Disease (COVID-19) Vaccinations on Patients Undergoing Breast Imaging Examinations	American Journal of Roentgenology (AJR)	Yes
Mitigating the impact of COVID-19 on control of vaccine-preventable diseases: a health risk management approach focused on catch-up vaccination	World Health Organization (WHO)	Yes
Monitoring COVID-19 vaccination: Considerations for the collection and use of vaccination data	World Health Organization (WHO); United Nations International Children's Emergency Fund (UNICEF)	Yes
Multidisciplinary guidance regarding the use of immunomodulatory therapies for acute coronavirus disease 2019 in pediatric patients	Pediatric Infectious Diseases Society	No
NACI rapid response: Recommended use of AstraZeneca COVID-19 vaccine in younger adults	Public Health Agency of Canada (PHAC)	No
National Psoriasis Foundation COVID-19 Task Force Guidance for Management of Psoriatic Disease During the Pandemic: Version 1	American Academy of Dermatology	Yes
Operating schools during COVID-19: CDC's considerations	Centers for Disease Control and Prevention (CDC)	Yes
Operational considerations for case management of COVID-19 in health facility and community: interim guidance, 19 March 2020	World Health Organization (WHO)	Yes
Operational considerations for influenza surveillance in the WHO European Region during COVID-19: interim guidance. October 2020	World Health Organization (WHO); European Centre for Disease Prevention and Control (ECDC)	Yes
Operational considerations for managing COVID-19 cases or outbreak in aviation	World Health Organization (WHO)	Yes

Operational considerations for managing COVID-19 cases or outbreaks on board ships	World Health Organization (WHO)	Yes
Operational considerations to expedite genomic sequencing component of GISRS surveillance of SARS-CoV-2, 16 February 2021	World Health Organization (WHO)	Yes
Operational guidance: acceptance and uptake of COVID-19 vaccines	World Health Organization (WHO)	Yes
Operational guidance: COVID-19 immunization service delivery modalities	World Health Organization (WHO)	Yes
Operational guidance: COVID-19 vaccination data and information management, including monitoring of vaccine effectiveness, January 2021	World Health Organization (WHO)	No
Operational guidance: evidence-based decisionmaking process for developing national COVID-19 vaccination strategies, January 2021	World Health Organization (WHO)	Yes
Operational guidance: health workforce and security	World Health Organization (WHO)	Yes
Operational guidance: legal and regulatory framework facilitating vaccine deployment	World Health Organization (WHO)	Yes
Operational guidance: management structure, advocacy and resources for COVID-19 vaccine deployment and vaccination	World Health Organization (WHO)	Yes
Operational guide for engaging communities in contact tracing	World Health Organization (WHO);International Federation of Red Cross (IFRC);United Nations Children Fund (UNICEF);Global Outbreak Alert and Response Network (GOARN)	Yes
Operational Strategy for K-12 Schools through Phased Prevention	Centers for Disease Control and Prevention (CDC)	Yes
Oxygen sources and distribution for COVID-19 treatment centres: interim guidance, 4 April 2020	World Health Organization (WHO)	Yes
Pandemic fatigue: reinvigorating the public to prevent COVID-19: policy framework for supporting pandemic prevention and management	World Health Organization (WHO)	Yes
Planning guidance for administration of COVID-19 vaccine	Public Health Agency of Canada (PHAC)	Yes
Planning guidance for immunization clinics for COVID-19 vaccines	Public Health Agency of Canada (PHAC)	Yes

Practical recommendations for the allergological risk assessment of the COVID-19 vaccination, a harmonized statement of allergy centers in Germany	Allergologie select	Yes
Practice recommendations for the management of children with suspected or proven COVID-19 infections from the Paediatric Mechanical Ventilation Consensus Conference (PEMVECC) and the section Respiratory Failure from the European Society for Paediatric and Neonatal Intensive Care (ESPNIC)	European Society of Paediatric and Neonatal Intensive Care (ESPNIC)	No
Preparedness, prevention and control of coronavirus disease (COVID-19) for refugees and migrants in non-camp settings	World Health Organization (WHO)	Yes
Preparedness, prevention and control of COVID-19 in prisons and other places of detention: interim guidance, 8 February 2021	World Health Organization (WHO)	Yes
Prevention, identification and management of health worker infection in the context of COVID-19: interim guidance, 30 October 2020	World Health Organization (WHO)	Yes
Promoting public health measures in response to COVID-19 on cargo ships and fishing vessels: interim guidance, 25 August 2020	World Health Organization (WHO)	Yes
Promoting the health of migrant workers in the WHO European Region during COVID-19. Interim guidance, 6 November 2020	World Health Organization (WHO)	Yes
Protecting people with disability during the COVID-19 pandemic	World Health Organization (WHO)	Yes
Public health considerations for elections and related activities in the context of the COVID-19 pandemic: interim guidance, 10 December 2020	World Health Organization (WHO)	Yes
Public health surveillance for COVID-19: interim guidance, 16 December 2020	World Health Organization (WHO)	Yes
Rational use of personal protective equipment for COVID-19 and considerations during severe shortages: interim guidance, 23 December 2020	World Health Organization (WHO)	Yes
Recommendations for Quarantine Duration in Correctional and Detention Facilities	Centers for Disease Control and Prevention (CDC)	Yes
Recommendations on the use of COVID-19 Vaccines	Public Health Agency of Canada (PHAC)	Yes

Recommendations to Member States to improve hand hygiene practices to help prevent the transmission of the COVID-19 virus: interim guidance, 1 April 2020	World Health Organization (WHO)	Yes
Regional strategy to improve access to medicines and vaccines in the Eastern Mediterranean, 2020, 2030, including lessons from the COVID-19 pandemic	World Health Organization (WHO)	Yes
Repurposing facilities for isolation and management of mild COVID-19 cases	World Health Organization (WHO)	Yes
Responding to community spread of COVID-19	World Health Organization (WHO)	Yes
Risk assessment and management of exposure of health care workers in the context of COVID-19: interim guidance, 19 March 2020	World Health Organization (WHO)	Yes
Risk assessment and management of health-care workers in the context of COVID-19	World Health Organization (WHO)	Yes
Risk communication and community engagement for COVID-19 contact tracing: interim guidance	World Health Organization (WHO)	No
Roadmap to improve and ensure good indoor ventilation in the context of COVID-19	World Health Organization (WHO)	No
Role of primary care in the COVID-19 response	World Health Organization (WHO)	Yes
Safe Eid al Adha practices in the context of COVID-19: interim guidance, 25 July 2020	World Health Organization (WHO)	Yes
Safe Ramadan practices in the context of the COVID-19	World Health Organization (WHO)	Yes
SARS-CoV-2 - increased circulation of variants of concern and vaccine rollout in the EU/EEA, 14th update	European Centre for Disease Prevention and Control (ECDC)	Yes
SARS-CoV-2 antigen-detecting rapid diagnostic tests: an implementation guide	World Health Organization (WHO)	Yes
SARS-CoV-2 genomic sequencing for public health goals	World Health Organization (WHO)	Yes
SARS-CoV-2 in animals used for fur farming: GLEWS+ risk assessment, 20 January 2021	World Health Organization (WHO)	Yes
Schooling during COVID-19: recommendations from the European Technical Advisory Group for schooling during COVID-19, June 2021	World Health Organization (WHO)	Yes
Schools and the Path to Zero: Strategies for Pandemic Resilience in the Face of High Community Spread	Multi-disciplinary group of experts at Harvard University, Brown University, Boston University, Tufts University, and New America	Yes
Schools Pathway for Covid-19, the Public Health approach	Health Protection Surveillance Centre	Yes

Screening K-12 students for symptoms of COVID-19: limitations and considerations.	Centers for Disease Control and Prevention (CDC)	Yes
Selecting digital contact tracing and quarantine tools for COVID-19	World Health Organization (WHO)	Yes
Sequencing of SARS-CoV-2: first update	European Centre for Disease Prevention and Control (ECDC)	Yes
Spanish consensus document on diagnosis, stabilisation and treatment of pediatric multisystem inflammatory syndrome related to SARS-CoV-2 (SIM-PedS)	Asociación Española de Pediatría	Yes
Strategic considerations in preparing for deployment of COVID-19 vaccine and vaccination in the WHO European Region, 9 October 2020	World Health Organization (WHO)	Yes
Strategies for Protecting K-12 School Staff from COVID-19	Centers for Disease Control and Prevention (CDC)	Yes
Strengthening preparedness for COVID-19 in cities and urban settings: interim guidance for local authorities	World Health Organization (WHO)	Yes
Strengthening the health system response to COVID-19 in the WHO transmission scenarios: action points: action points for the WHO European Region (1 April 2020)	World Health Organization (WHO)	Yes
Strengthening the health systems response to COVID-19: technical guidance #6: preventing and managing the COVID-19	World Health Organization (WHO)	Yes
Summary of the 31st meeting of the International Task Force for Disease Eradication, 20–21 October 2020	World Health Organization (WHO)	Yes
Summary report on a WHO online consultation in response to the COVID-19 pandemic planning for rapid dissemination and implementation of the WHO consolidated guideline on self-care interventions to strengthen sexual and reproductive health in the Eastern Mediterranean Region, virtual meeting, 30 April 2020	World Health Organization (WHO)	Yes
Summary report on the virtual meeting of the regional Green Light Committee for the Eastern Mediterranean, 18 June 2020	World Health Organization (WHO)	Yes
Surveillance case definitions for human infection with novel coronavirus (nCoV), interim guidance, 15 January 2020	World Health Organization (WHO)	Yes

Technical specifications for invasive and non-invasive ventilators for COVID-19	World Health Organization (WHO)	Yes
Technical specifications for pressure swing adsorption (PSA) oxygen plants	World Health Organization (WHO)	Yes
Technical specifications of personal protective equipment for COVID-19: interim guidance, 13 November 2020	World Health Organization (WHO)	Yes
Testing, Screening, and Outbreak Response for Institutions of Higher Education (IHEs)	Centers for Disease Control and Prevention (CDC)	Yes
The Advisory Committee on Immunization Practices, interim recommendation for use of Janssen COVID-19 vaccine, United States, February 2021	Centers for Disease Control and Prevention (CDC)	No
The Advisory Committee on Immunization Practices, Interim Recommendation for Use of Moderna COVID-19 Vaccine	Centers for Disease Control and Prevention (CDC)	No
The Advisory Committee on Immunization Practices, Interim Recommendation for Use of Pfizer-BioNTech COVID-19 Vaccine, United States, December 2020	Centers for Disease Control and Prevention (CDC)	No
The Advisory Committee on Immunization Practices, Updated Interim Recommendation for Allocation of COVID-19 Vaccine, United States, December 2020	Centers for Disease Control and Prevention (CDC)	Yes
The heart and COVID-19: what cardiologists need to know	Arq Bras Cardiol	No
Therapeutics and COVID-19: living guideline, 6th July 2021	World Health Organization (WHO)	No
Transmission of SARS-CoV-2: implications for infection prevention precautions	World Health Organization (WHO)	Yes
Use of Anticoagulation in Patients with COVID-19	American Society of Hematology (ASH)	No
Use of Chest Imaging in the Diagnosis and Management of COVID-19	World Health Organization (WHO)	No
Vaccinating Pregnant and Lactating Patients Against COVID-19	American College of Obstetricians and Gynaecologists (ACOG)	Yes
Vaccine-Induced Prothrombotic Immune Thrombocytopenia (VIPIT) Following AstraZeneca COVID-19 Vaccination	Ontario COVID-19 Science Advisory Table	Yes
Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19: interim guidance, 29 July 2020	World Health Organization (WHO); United Nations International Children's Emergency Fund (UNICEF)	Yes

Western Pacific Regional guide for the immunization programme and vaccine-preventable disease surveillance during the COVID-19 pandemic	World Health Organization (WHO)	Yes
What are relevant, feasible and effective approaches to promote acceptance, uptake and adherence to physical distancing measures for COVID-19 prevention and control?	World Health Organization (WHO)	Yes
WHO high-level mission to North Macedonia on coronavirus disease 2019 (,“COVID-19),“ 23,“25 June 2020	World Health Organization (WHO)	No
WHO information note: COVID-19: considerations for tuberculosis (TB) care, 5 May 2021	World Health Organization (WHO)	Yes
WHO interim guidance note: health workforce response to the COVID-19 pandemic: April 2020	World Health Organization (WHO)	No
WHO living guideline: drugs to prevent COVID-19: interim guidance, 2 March 2021	World Health Organization (WHO)	No
WHO R&D Blueprint: novel Coronavirus: outline of designs for experimental therapeutics	World Health Organization (WHO)	No
WHO R&D Blueprint: novel Coronavirus: outline of trial designs for experimental therapeutics, January 27, 2020, Geneva, Switzerland	World Health Organization (WHO)	Yes
WHO R&D Blueprint: novel Coronavirus: prospects for evaluating cross-reactivity of nCoV with SARS-CoV: January 24, 2020, Geneva, Switzerland	World Health Organization (WHO)	No
WHO recommendations to reduce risk of transmission of emerging pathogens from animals to humans in live animal markets or animal product markets, 26 March 2020	World Health Organization (WHO)	Yes
WHO Regional Office for Europe recommendations on influenza vaccination for the 2020/2021 season during the ongoing COVID-19 pandemic	World Health Organization (WHO)	Yes
Why people living and working in detention facilities should be included in national COVID-19 vaccination plans: advocacy brief	World Health Organization (WHO)	Yes

Supplementary Table S3. Examples at the judgement level for the Good Practice Statement evaluation criteria. "Created by authors"

Good Practice Statement Criterion	Judgment	Example
(1) Statement is clear and actionable	Yes	<p>"The World Health Organization (WHO) recommends COVID-19 vaccination services select personal protective equipment (PPE) based on risk assessment as part of standard precautions." From <i>Infection prevention and control (IPC) principles and procedures for COVID-19 vaccination activities</i></p> <p>Justification: This is a clear actionable statement directed to hospital managers, immunization programme managers, Infection Prevention Control (IPC) focal points as well as for health workers involved in COVID-19 vaccination delivery.</p>
	Probably Yes	<p>"It is important to maintain an optimal humidity level, between 30% and 50% in indoor settings." From <i>COVID-19: Guidance on indoor ventilation during the pandemic</i></p> <p>Justification: Statement refers to setting (indoor) but does not use actionable term, rather uses informative language.</p>
	Probably No	<p>"In immunization clinic settings, pre-loading of syringes supports timely and efficient vaccine administration." From <i>Planning guidance for immunization clinics for COVID-19 vaccines</i></p> <p>Justification: The statement uses informative language but specifies setting (Immunization clinic) for applying the statement.</p>
	No	<p>"According to Public Health Agency of Canada, securing additional staff in immunization clinics will be necessary." From <i>Planning guidance for immunization clinics for COVID-19 vaccines</i></p> <p>Justification: Statement is suggestive rather than actionable.</p>
(2) Message really necessary in regard to actual healthcare practice	Yes	<p>"Increased health surveillance should be considered for mink and mink farm workers and any other people in close contact with mink, especially at farms with a previous/current history of personnel with COVID-19." From <i>Detection of new SARS-CoV-2 variants related to mink</i></p> <p>Justification: "Intensively reared animal species, susceptible to SARS-CoV-2, such as mink may act as an amplifier of the virus, leading to an increased virus biomass in the environment, and a greater risk of virus mutations and transmission within farmed mink and between mink and humans."</p>

	Probably Yes	<p>“The Public Health Agency of Canada recommends schools increase ventilation by considering the following, for all ages: move activities outdoors when possible (for example, lunch, classes, physical activity) and consider moving classrooms outside when space and weather permit; Ensure that the ventilation system operates properly increase air exchanges by adjusting the HVAC system; Open windows when possible and if weather permits.” From <i>COVID-19 guidance for schools Kindergarten to Grade 12</i></p> <p>Justification: Increasing ventilation may help to reduce transmission and can limit spread of infection in schools and the community. Consequently, this can lessen the burden on healthcare systems.</p>
	Probably No	<p>“Perform hand hygiene after each recipient using soap and water or with hand sanitizer containing 60-80% alcohol.” From <i>Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19</i></p> <p>Justification: This act may usually be conducted in regular practice.</p>
	No	-
(3) Implementing the statement likely results in a large net positive consequence	Yes	<p>“The national infection prevention and control (IPC) programme and COVID-19 response should consider supporting and strengthening IPC in long-term care facilities (LTCFs) to be a high priority.” From <i>Infection prevention and control guidance for long-term care facilities in the context of COVID-19: interim guidance</i></p> <p>Justification: Implementing the statement “can significantly reduce the risk of SARS-CoV-2 transmission among residents, staff and caregivers in long-term care facilities (LTCFs).”</p>
	Probably Yes	<p>“Adapt school opening policies and practices to expand access to marginalized groups such as previously out-of-school children, displaced/migrant children and minorities.” From <i>Framework for reopening schools</i></p> <p>Justification: Implementation will likely increase equitable access to education and strengthen the protection, health and safety of children.</p>
	Probably No	<p>“The use of portable air filtration devices with high-efficiency particulate air (HEPA) filter devices could be considered as an additional protection in situations where enhancing natural or mechanical ventilation is not possible and when physical distancing cannot be achieved.” From <i>COVID-19: Guidance on indoor ventilation during the pandemic</i></p>

		Justification: Without public adherence to other public health measures (like limiting number of individuals indoors, physical distancing, wearing masks), using HEPA filters may not have a large net positive effect.
	No	-
(4) Collecting and summarizing the evidence is a poor use of a guideline panel's limited time, energy, or resources	Yes	<p>According to the Public Health Agency of Canada (PHAC), the influenza vaccine should continue to be offered to anyone 6 months of age and older who does not have contraindications to the vaccine. <i>From Guidance on the use of influenza vaccine in the presence of COVID-19</i></p> <p>Justification: "The influenza vaccine has a long-standing safety record and is a critical tool to protect against influenza-related disease and to reduce the influenza-associated burden on the Canadian health care system, which is even more important for this influenza season, in the context of COVID-19. "</p>
	Probably Yes	<p>"To prevent transmission of COVID-19 at immunization clinics, it will be essential to minimize crowding and ensure physical distancing." <i>From Planning guidance for immunization clinics for COVID-19 vaccines</i></p> <p>Justification: Minimizing crowding at vaccine clinics prevents the transmission of SARS-CoV-2 and can encourage the public to come in and get vaccinated.</p>
	Probably No	<p>"Wherever possible, high-risk exposure contacts should be actively followed-up by public health authorities, whereas low-risk exposure contacts should self-monitor for symptoms while observing physical distancing measures and avoiding travel." <i>From Contact tracing: public health management of persons, including healthcare workers, who have had contact with COVID-19 cases in the European Union third update</i></p> <p>Justification: Evidence on how to classify risk exposure and how to conduct efficient contact tracing is evolving and recommendations may require continuous updating.</p>
(5) Rationale connecting indirect evidence	Yes	<p>"Vaccination should be rapidly accelerated to target priority groups." <i>From SARS-CoV-2 - increased circulation of variants of concern and vaccine rollout in the EU/EEA, 14th update</i></p> <p>Justification: "Vaccines are a key part of a long-term strategy to bring SARS-CoV-2 under control. The emergence of more transmissible variants may cause increased hospital admissions and deaths in the coming weeks, despite ongoing vaccine deployment. Some emerging</p>

		variants may also partially escape the immunity induced by the currently available vaccines."
	Probably Yes	<p>The Centers for Disease Control and Prevention recommends that healthcare facilities should ensure consistent recommended infection control practices for hospitalized pregnant patients who have suspected or confirmed COVID-19. <i>From Considerations for Inpatient Obstetric Healthcare Settings</i></p> <p>Justification: When preparing for and responding to patients with suspected or confirmed SARS-CoV-2 infection, consistent recommended infection control practices are important to prevent secondary spread of infection in healthcare facilities.</p>
	Probably No	<p>Countries are strongly urged to execute only high-quality preventive vaccination campaigns that can be conducted under safe conditions, without undue harm to health workers and the community when considering lifting any temporary suspensions on preventive mass vaccination campaigns. <i>From Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19</i></p> <p>Justification: There is no description in the guideline what high-quality means. Therefore, the link between the bodies of indirect evidence are unclear.</p>