A legal mapping of 48 WHO member states' inclusion of public health emergency of international concern, pandemic, and health emergency terminology within national emergency legislation in responding to health emergencies

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WHO has determined a public health emergency of international concern (PHEIC) seven times, and beyond this nomenclature declared COVID-19 to be a pandemic. Under the International Health Regulations (IHR), and through their operationalisation in the joint external evaluation (JEE), governments are urged to create suitable legislation to be able to enact a response to a public health emergency. Whether the pandemic declaration had a greater effect than a PHEIC in encouraging goverments to act, however, remains conjecture, as there is no systemic analysis of what each term means in practice and whether either has meaningful legal implications at the national level. We undertook a legal scoping review to assess the utilisation of PHEIC and pandemic language within national legislation in 28 WHO member states. Data were collected from national websites, JEE reviews, COVID Analysis and Mapping of Policies Tool, Natlex, and Oxford Compendium of National Legal Responses to COVID-19. We found that only 16% of countries have any reference to the PHEIC in national legislation and 37·5% of countries reference the term pandemic. This finding paints a weakened picture of the IHR and PHEIC mechanisms. Having such legalese enshrined in legislation might enhance the interaction between WHO determining a PHEIC or declaring a pandemic and resulting action to mitigate transnational spread of disease and enhance health security. Given the ongoing negotiations at WHO in relation to the amendments to the IHR and creation of the pandemic accord, both of which deal with this declaratory power of the PHEIC and pandemic language, negotiators should understand the possible implications of any changes to these proclamations at the national level and for global health security.

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Introduction

A public health emergency of international concern (PHEIC) is "an extraordinary event which is determined to constitute a public health risk to other states through the international spread of disease" and "potentially require[s] a coordinated international response".[1] The PHEIC is a key mechanism within global public health that sounds the alarm about an emerging pathogen.[2] The PHEIC mechanism sits within the International Health Regulations (IHR) 2005—the binding international law to "prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."[1]

The Director-General of WHO determines a PHEIC on the advice of an Emergency Committee of experts, who evaluate the event based on: whether it is extraordinary; is a public health risk to other states; and possibly requires a coordinated international response.[1] In case these criteria are met, the Director-General might issue temporary recommendations to prevent or reduce spread of the disease. The Director-General has determined a PHEIC seven times since the mechanism's inception for: H1N1 in 2009, poliovirus in 2014, Ebola virus in 2014 and 2019, Zika virus in 2016, COVID-19 in 2020, and mpox in 2022.[3,4]

The creation of PHEIC, amid broader revisions to the IHR in 2005, gave WHO unprecedented power in times of health crises and changed the obligations between member states and WHO.[5] At the same time, the regulations required member states to review their health legislation, urging them to "take all appropriate measures for furthering the purpose and eventual implementation of the International Health Regulations (2005) pending their entry into force, including development of the necessary public health capacities and legal and administrative provisions".[4,5]

To monitor IHR implementation WHO established joint external evaluation (JEE), including reviewing the legal provisions of member states for "specific legal instruments describing the legal authorities for health emergency declarations, preparedness, operational readiness and response planning".[6] It can be argued that the IHR, and their corollary JEE, aim to link WHO responses to domestic legislation, with provisions to require governments to take action at the national level at the point at which a PHEIC is determined and, in turn, implement WHO temporary recommendations.[6,7]

Unlike PHEIC, the term pandemic has no commonly understood meaning.[8] WHO once had pandemic phases as part of their programme for influenza preparedness but removed the term after the H1N1 outbreak.[9] The term pandemic remains key to discussions on COVID-19. In January, 2020, WHO determined COVID-19 a PHEIC.[3] The following month, when characterising the global response, Director-General Tedros Adhanom

Ghebreyesus warned of "alarming levels of inaction".[10] In March, 2020, WHO declared COVID-19 a pandemic.[3] This shift in language is notable; the Director-General moved from the legally established PHEIC terminology to that of pandemic—a word possibly familiar but devoid of any legal definition. By deploying this emotive term, the Director-General might have felt that such language would alarm states to the seriousness of the emerging COVID-19 threat.

Anecdotally, many government statements instigating emergency responses to COVID-19 referred to the langauage of WHO declaring a pandemic, not the utilisation of the legally established PHEIC mechanism.[11–14] Whether the pandemic declaration had a greater effect than the PHEIC, however, remains conjecture, as there is no systemic analysis of what a PHEIC determination or pandemic declaration mean in practice, and whether either has meaningful policy or legal implications nationally. This Health Policy starts this analysis. By searching public health, disaster and emergency legislation of member states for the inclusion of the terms PHEIC, pandemic, epidemic, WHO, or public health emergency (PHE), we consider whether domestic legislation uses either term to trigger emergency response mechanisms, or not. Consequently, we aim to better understand what drives state action during health emergencies and whether WHO proclamations have any compelling force. We seek to understand what words, if any, spur global action in the early stages of a public health crisis.

The timing of our research is meaningful. The Working Group on Amendments to the IHR have embarked on a process to update the regulations and their functioning in the wake of COVID-19.[15] The proposed amendments to Article 12, which concerns the PHEIC, include the introduction of tiered or regional PHEICs, which makes the need for an evidence-based evaluation of the PHEIC's current effect apparent.[16] In a separate, parallel process, governments are negotiating a pandemic agreement, which might include a mechanism for declaring a pandemic.[17] We need to better understand the role of this language, its comparison to the PHEIC, and how the two might interact, to ensure any new treaty language has a meaningful effect on governments when used.

Background

Literature attests to the PHEIC's role in "stimulat[ing] global action",[18] "mobilis[ing] international attention",[19] and "[increasing] coordination and international cooperation"[20] when responding to the early stages of an emerging infectious disease threat.[21] For Eccleston-Turner and Wenham, the PHEIC is seen as "largely symbolic"[2] and devoid of "comprehensive, enforceable legal powers to require member states to do much of anything".[2] A comprehensive analysis of the PHEIC's relation to national health legislation is absent from literature. An assumption of influence exists based on presumed legal or normative power, despite no evidence of effectiveness. This assumption primarily arises from the authority ascribed to WHO, based on this institution's assumed expertise and constitutional mandate.[22] Yet, such authority is not indubitable. The Emergency Committee and WHO often do not cite the legal criteria in the IHR when justifying a PHEIC,[2] which leaves the determination of a PHEIC prone to political influence, undermining WHO's normative power.[2] Transparent decision making remains a further concern, noting that Emergency Committee deliberations occur behind closed doors, and often offer vague explanatory statements.[23] Reddy and colleagues consider if WHO uses PHEIC determinations to control the narrative during a health emergency, to show the institution is doing something.[24] Inconsistencies in the determination of the PHEIC risk eroding any normative power it holds.

The first PHEIC came in 2009 for the H1N1 influenza pandemic. Commended for its earlier role during an outbreak of severe acute respiratory syndrome, WHO responded quickly, determining a PHEIC within one month of identified cases.[3] However, member states widely ignored WHO's temporary recommendations and implemented pork import bans and travel restrictions.[25] Subsequently, WHO was accused of sending false alarms, fuelling public fear, and leading several member states to adopt measures that proved unnecessary.[25,26] This perceived overreaction might explain the 4-month delay in determining Ebola virus a PHEIC in 2014.[25] Earlier use, critics argue, would have galvanised a global response, focused attention, and reduced the number of infections and deaths, albeit under the assumption the PHEIC had normative power to do so.[19] Additional criticism came when leaked emails suggested political and economic concerns influenced the delay.[27] During the first instances of PHEIC use, the authority of WHO had been challenged, with widespread non-compliance to the organisation's recommendations and interference in the PHEIC determination process undermining its legal and normative significance.

With mounting criticism of WHO's response to Ebola, the Director-General determined a PHEIC for Zika virus related microcephaly in February, 2016.[2] This decision was notable as Zika typically causes a mild illness, while Guillain-Barré syndrome and microcephaly (the symptoms associated with Zika virus) are not pathogenic, thereby stretching whether the criteria for a PHEIC determination had been met.[2] Moreover, researchers had yet to establish definitively a causal link between Zika and such complications.[28] The Emergency Committee did not mention a threat of international spread, whether the situation was extraordinary, or if an international response was necessary, yet recommended a PHEIC.[29] Inevitably this decision exposed WHO to criticism and this jeopardised the perceived significance of the PHEIC.

The PHEIC for Ebola in 2019 came almost one year after the emergence of initial cases, with the outbreak becoming

the second worst Ebola outbreak globally.[3] The COVID-19 PHEIC determination in 2020 was mired in controversy, when the first meeting of the Emergency Committee in mid-January, 2020 recommended that the outbreak did not yet constitute a PHEIC—a decision which was overturned the following week. The effect of the delay elicited a mixed response, with Brazil declaring a national public health emergency before the PHEIC determination and other WHO states waiting until after the pandemic declaration to act.[30,31] Controversy during the mpox outbreak focused on the decision making process, with the Director-General determining a PHEIC despite no consensus by the Emergency Committee, and despite the endemic status of mpox in Africa before the European-centred outbreak for which a PHEIC was never considered.[32] Inconsistencies in the PHEIC process, coupled with member states acting independently, undermines the legal and normative power of the mechanism.

Beyond the IHR, pandemic influenza in 1997 and subsequent adoption of the pandemic preparedness guidance in 1999 formally introduced the term pandemic, thereby empowering WHO to outline tiers during pandemic influenza based on predetermined measures relating to severity.[2] These phases were designed to help ensure rapid containment, guide national responses, and work in tandem with the IHR.[33] The first, and only, test came with the 2009 H1N1 influenza pandemic. WHO communication focused on the pandemic phases, despite the existence of PHEIC as the legally established mechanism. The dual use of the PHEIC and the pandemic phases created confusion, particularly when PHEIC temporary recommendations differed from pandemic phase recommendations.[25] Furthermore, the Emergency Commitee went beyond its remit in determining the pandemic phase.[2] After the H1N1 influenza pandemic WHO dropped pandemic phases and the term pandemic from their working nomenclature. This change made the decision by the Director-General to declare COVID-19 a pandemic in March, 2020, notable. Pandemic had no basis in any WHO legal or policy mechanism and came after the Director-General had used the highest alert level at his disposal; the PHEIC in January, 2020. When making the statement Tedros acknowledged that misuse of the word pandemic "can cause unreasonable fear, or unjustified acceptance that the fight is over, leading to unnecessary suffering and death".[10] The controversy surrounding the use of PHEIC, competing views of its legal and normative power, and the history of WHO use of the PHEIC and pandemic terms leaves a muddled picture. What is clear is that little evidence exists as to what spurs member state action during times of health emergencies. This lacuna of evidence motivates our research, reviewing health and emergency legislation across member states to identify whether the terms PHEIC, pandemic, or other public health language are present, and thus whether WHO language has any direct link to domestic legislation. In doing so we start to quantify the domestic legislative significance of the PHEIC and pandemic terminology, allowing for future analysis as to what extent such terms trigger states to prepare, detect, or respond to a health emergency.

Methods

We undertook a scoping review to assess the utilisation of PHEIC and pandemic language within national legislation. Eight member states per WHO region were selected (figure 1), with purposeful intent to include differently sized states, differing income levels, and differing governance structures.

Only sources in English, Spanish, and Portuguese or sources for which English translations of legislation were

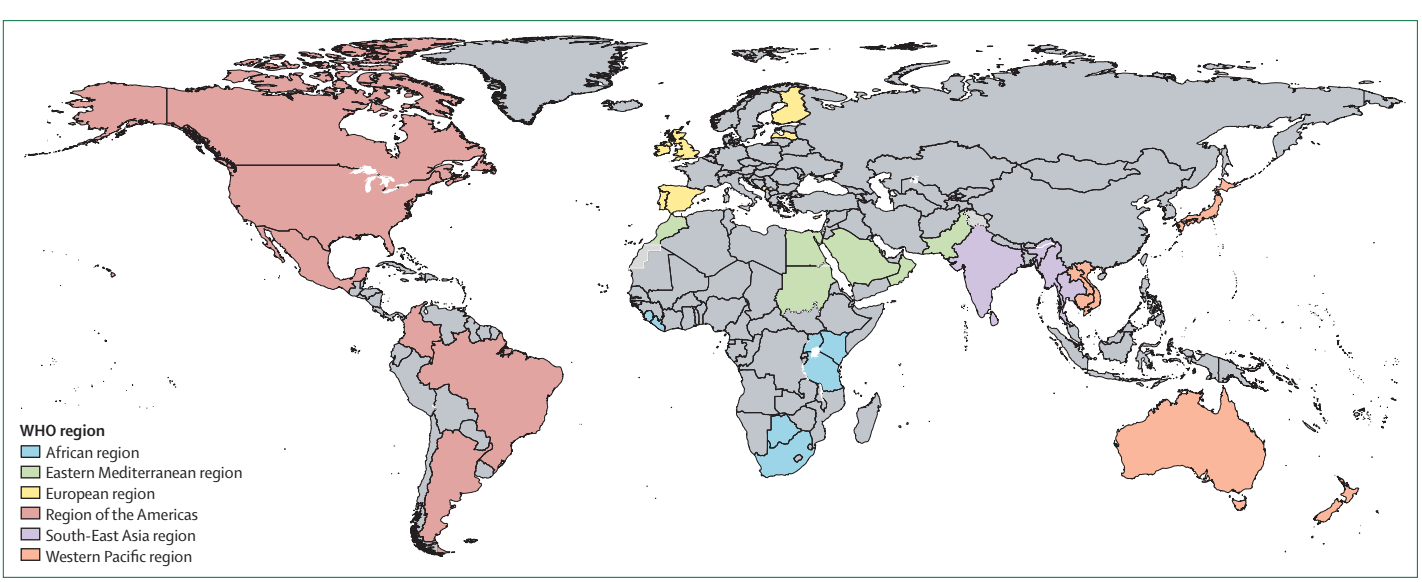

Figure 1: **Countries selected for study, highlighted according to the WHO region under which they fall**

Figure 2: **Details of the search strategy according to case country**
COVID AMP=COVID analysis and mapping of policies tool. JEE=Joint External Evaluation. Oxford=Oxford Compendium of National Legal Responses to COVID-19.

Panel: Process for analysis of included legislation

(1) Initial review involved searching the legislation for terms: "public health emergency of international concern", "PHEIC", "pandemic", "epidemic", "World Health Organi(s/z)ation", and "WHO"; "emergencia de salud pública de importancia internacional", "ESPII", "pandemia", "epidemia", "Organización mundial de la salud", and "OMS"; "emergência de saúde pública de importância internacional", "ESPII", "pandemia", "epidemia", and "Organização Mundial de Saúde". Terms were searched independently of each other, with the use of either search functions within PDF viewers or manually. Positive identification of these terms was noted and the location recorded. When used within the context of a public health emergency, the description, initiating authority, and the location were recorded. When not used for a public health emergency, the legislation was reviewed according to the next step.

(2) Secondary review began with a manual search for any mechanism to declare an emergency in general (eg, in response to a disaster, security threat, or other catastrophe). When identified, we noted who would trigger, declare, and initiate this provision, if a threat to health was within the definition, and what powers became available to relevant authorities.

(3) Finally, the date of the legislation (or associated updates) was noted to show whether this inclusion was present before COVID-19, as might be expected following International Health Regulations entering into force in 2007. Secondly, the date revealed whether legislation adopted during or after COVID-19 referenced WHO language or not.

For more on the **NATLEX database** see https://www.ilo.org/dyn/natlex/natlex4.home?p_lang=en

available were included in the review. In each WHO member state we sourced national legislation related to public health, states of emergency, and other relevant legal measures likely used during health threats. For our review we utilised four data sources:

JEE were sourced and the Prevent 1 Legal Instruments concerning national legislation, policy, and financing analysed. This evaluation tool lists relevant legislation, as presented by the host country, and includes a summary regarding the status of IHR implementation. The voluntary nature of JEEs meant reports were not available for all states.

The COVID Analysis and Mapping of Policies platform (COVAMP),[34] a database mapping COVID-19 legislation to the national and subnational government that enacted it, was analysed. COVAMP includes a category for emergency declarations, containing pertinent emergency legislation.

NATLEX is a database of national labour, social security, and related human rights legislation maintained by the International Labour Organization. The database categorises legislation by country and subject, including public health policy and regulations, medical care and sickness benefit, and protection against certain hazards. NATLEX includes all UN members, ensuring countries without a JEE or COVAMP study were covered, and offered validation to previous findings.

The Oxford Compendium of National Legal Responses to COVID-19 contains reports compiled by legal scholars from participating countries.[35] Each outlines the structure of the target government, its statutory mechanisms, existing public health legislation, and its legal response to COVID-19. The reports confirmed legislation that had been identified, highlighted statutes

we had missed, and summarised the meaning of legal terms specific to the national legislative processes (figure 2).

Identified legislation was sourced from official government websites when possible. The most recent available updates (as of May, 2023) were reviewed to ensure inclusion of any amendments or changes. In countries with a federal, or devolved, system of government, legislation was sought both from the national government and state, province, or territory government, provided these administrations were responsible for health or emergencies interventions. Analysis of included legislation followed a three-stage process (panel).

	Number of countries (n=48)	Proportion (%)
PHEIC	8	16·67%
Pandemic	18	37·5%
Epidemic	38	79·17%
WHO	27	56·25%
PHE	13	27·08%

The total numbers of countries are listed, and the column will not add up to 48. PHE=public health emergency. PHEIC=public health emergency of international concern.

Table 1: **Number of countries in all WHO regions with listed terms present in legislation**

	AFR (n=8)	EMR (n=8)	EUR (n=8)	PAH (n=8)	SEAR (n=8)	WPR (n=8)
PHEIC	1	0	2	4	0	1
Pandemic	3	1	5	4	1	4
Epidemic	8	7	7	6	6	4
WHO	3	3	6	7	4	4
PHE	2	0	2	5	2	2

The total numbers of countries are listed, and the columns will not add up to 8. AFR=African region. EMR=Eastern Mediterranean region. EUR=European region. PAH=Pan American Health Organization. PHE=public health emergency. PHEIC=public health emergency of international concern. SEAR=South-East Asia region. WPR=Western Pacific region.

Table 2: **Number of countries per WHO region with listed terms in legislation**

Limitations

National government databases often contain hundreds of current and past legislations coded or named in different ways, which necessitated the creation of a search protocol. Our use of these databases relies on their accuracy. We took an include all approach when considering different types of legislation (eg, acts, declarations, laws, provisions, etc) Given jurisdictions apply different normative and legal weights to the acts, declarations, laws, and provisions terms, we refrained from distinguishing between them to ease cross-national comparison. We were unable to claim that we have captured all legislation exhaustively. Our case study selection process, based on the availability of data and the searches restricted to sources in English, Spanish, and Portuguese, weakens generalisability of our results. Moreover, our selection criteria meant that we do not have homogeneity in types of governance structures and political context of countries in question, both of which might influence the degree of WHO language in national legislation. Finally, regarding our analysis of before and after 2020 legislation, our use of the most recent versions of legislation risks amendments being associated with the original date of statute enactment, despite the analysed laws having been added at a later date.

Results

165 pieces of national legislation from 48 countries were reviewed. Eight (16·7%) of 48 countries had legislation that referenced PHEIC; meanwhile 18 (37·5%) of 48 countries referenced pandemic, 38 (79·2%) of 48 countries referenced the term epidemic, 27 (56·3%) of 48 countries referenced WHO, and 13 (27·1%) of 48 countries had a PHE provision. Table 1 outlines these findings and table 2 details the number of countries analysed per WHO region.

Eight countries had legislation that referenced PHEIC—four in the Pan American Health Organization (PAH), two in the European region (EUR), one in the African region (AFR), and one in the western Pacific regions (WPR). No references in the eastern Mediterranean region (EMR) and South-East Asian region (SEAR) were found. 18 (37·5%) of 48 countries had legislation that referenced pandemic; five (62·5%) of eight in the EUR region, four in the PAH and WPR regions, three in the AFR region, and one in each

	AFR	EMR	EUR	PAH	SEAR	WPR
PHEIC	Botswana	NA	Ireland and Latvia	Barbados; Brazil; Chile; and Colombia	NA	Australia
Pandemic	Botswana; South Africa; and Tanzania	United Arab Emirates	Finland; Ireland; Latvia; Portugal; and Spain	Argentina; Chile; Colombia; and the USA	Nepal	Cambodia; Japan; New Zealand; and Singapore
PHE	Botswana and Seychelles	NA	Ireland and Latvia	Argentina; Barbados; Brazil; Colombia; and the USA	Maldives and Nepal	Cambodia; Singapore

AFR=African region. EMR=Eastern Mediterranean region. EUR=European region. NA=not applicable.PAH=Pan American Health Organization. SEAR=South-East Asia region. WPR=Western Pacific region.

Table 3: **Countries with the terms public health emergency of international concern (PHEIC), pandemic, or public health emergency (PHE) in legislation**

	PHEIC	Pandemic
AFR		
Botswana	Yes	No
Seychelles	No	No
EMR		
NA	NA	NA
EUR		
Ireland	No	No
Latvia	Yes	Yes
PAH		
Argentina	No	Yes
Barbados	No	No
Brazil	Yes	No
Colombia	Yes	Yes
USA	No	Yes
SEAR		
Maldives	No	Yes
Nepal	No	No
WPR		
Cambodia	No	Yes
Singapore	No	No

AFR=African region. EMR=Eastern Mediterranean region. EUR=European region. NA=not applicable. PAH=Pan American Health Organization. PHEIC=public health emergency of international concern. SEAR=South-East Asia region. WPR=Western Pacific region.

Table 4: **The presence of PHEIC or pandemic terminology in identified public health emergency provisions**

	Before 2020	After 2020
PHEIC	5	3
Pandemic	10	8
Epidemic	37	1
WHO	23	4
PHE	10	3

The total numbers of countries are listed, and the columns will not add up to 48. PHE=public health emergency. PHEIC=public health emergency of international concern.

Table 5: **Number of WHO member states countries with listed terms first referenced in legislation**

of the EMR and SEAR regions. 13 (27·1%) of 48 countries had legislation that had a PHE provision; five (62·5%) of eight in the PAH and two in each of the AFR, EUR, SEAR, and WPR regions. No references in the EMR region were found (tables 3, 4).

Of the 13 countries that have a PHE provision, four referenced the term PHEIC and six referenced pandemic. Only Latvia and Colombia referenced both. Several countries, including Seychelles, Ireland, Barbados, Nepal, and Singapore, have PHE provisions that do not reference PHEIC or pandemic.

38 countries had legislation that referenced the term epidemic—our most common finding. Most countries in each region referenced the term epidemic; half of the countries reviewed in WPR referenced the term epidemic. 27 countries had legislation that referenced the term WHO—our second most common finding.

Of the eight countries with legislation referencing PHEIC and 18 countries referencing pandemic there was an approximate split between the legislation arising from before the year 2020 and after 2020. This finding is in comparison with the terms epidemic, WHO, and PHE, all of which first feature in pre-2020 legislation. Table 5 outlines the number of countries that reference the terms according to year first referenced and table 6 details this legislation according to WHO region.

Discussion

Revisions to the IHR and establishment of PHEIC are seen as reaffirming WHO's position within global health security, granting this organisation the power to determine when to alert the world to potential threats and coordinate global responses.[5] To enact such a change, member states agreed to review national legislation, including monitoring via the IHR Monitoring and Evaluation framework to check for" "adequate legal provisions for IHR implementation" and "specific legal instruments describing the legal authorities for health emergency declarations, preparedness, operational readiness and response planning".[6] Although not specified that states must mirror the PHEIC in national legislation, including such terminology within domestic legislation falls within the voluntary JEE rather than the

	AFR before year 2020 (n=8)	AFR since year 2020 (n=8)	EMR before year 2020 (n=8)	EMR since year 2020 (n=8)	EUR before year 2020 (n=8)	EUR since year 2020 (n=8)	PAH before year 2020 (n=8)	PAH since year 2020 (n=8)	SEAR before year 2020 (n=8)	SEAR since year 2020 (n=8)	WPR before year 2020 (n=8)	WPR since year 2020 (n=8)
PHEIC	1	0	0	0	1	1	2	2	0	0	1	0
Pandemic	1	2	1	0	4	1	2	2	1	0	1	3
Epidemic	7	1	7	0	7	0	6	0	6	0	4	0
WHO	3	0	1	2	5	1	6	1	4	0	4	0
PHE	2	0	0	0	1	1	5	0	2	0	0	2

The total numbers of countries are listed, and the columns will not add up to 8. AFR=African region. EMR=Eastern Mediterranean region. EUR=European region. PAH=Pan American Health Organization. PHE=public health emergency. PHEIC=public health emergency of international concern. SEAR=South-East Asia region. WPR=Western Pacific region.

Table 6: **Number of countries per WHO region with listed terms first referenced**

legal obligations of the IHR. We argue the functioning of the PHEIC mechanism relies on legal mapping, to spur globalised cosmopolitan action during times of health crises. Legislation, by nature, places obligations on governments to act. Thus incorporating WHO terminology into national legislation increases the potential for improved alignment of national and global decision making. Consequently, according to the normative cosmopolitan logic of global health, the improved alignment of international and national law makes for better pandemic preparedness and response.

The results of our analysis, however, paint a weakened picture of such alignment. 40 (83·3%) of 48 member states studied have no mention of the PHEIC in legislation, confirming that for the vast majority of member states a PHEIC determination has no national legal significance. The same is true for pandemic terminology, with 30 member states ascribing no legal weight to the term, albeit this language is not cited within the IHR and thus not legally binding. This issue matters, because having such language enshrined in legislation might enhance the interaction between WHO determining a PHEIC or declaring a pandemic and the resulting action to mitigate transnational spread of disease. Whether countries found to have had PHEIC or pandemic terminology had measurably better responses to infectious disease outbreaks, such as COVID-19, is beyond the scope of our study. What we do seek to show is the minimal extent to which states are giving authority to WHO through their national legislative processes, given that WHO has a mandate as the directing and coordinating authority in global health.

Although these results are independently revealing, their comparison is also of note. More than double the member states analysed mentioned pandemic than PHEIC, even though the term pandemic is not formally used in international law or by WHO. Simultaneously, 35 (72·9%) of 48 countries studied had no specific provisions for declaring a PHE, despite IHR and JEE expectations. Of countries that did, only four referenced PHEIC and six referenced the term pandemic, showing that even when PHE provision was found, majority of member states determined PHE at the domestic level and had no interaction with WHO terminology. Whether a PHEIC determination or pandemic declaration has any meaningful legal consequence across our cases is difficult to conclude.

The term epidemic was most frequently identified (in 38 countries). This frequent use of the term is possibly because this term predates the IHR and has been commonplace in public health legislation for centuries, describing a localised or intranational outbreak of disease. Our findings, in tandem with the infrequent use of the terms PHEIC or pandemic, suggests state legislation was not changed in accordance with IHR expectations and continues to define disease threats as national concerns. This is noteworthy, as the IHR (2005) aimed to orientate states towards an all-hazards, globalist approach.[25] States risk failing to consider local disease as a threat globally, with emergency responses geared to domestic concerns, and weakens the belief that member states recognise the threat local disease poses to global health security. This approach not only undermines the intention of the IHR—to prevent, protect against, control, and provide a public health response to the international spread of disease—but erodes the authority of WHO.

Among eight (16·7%) of 48 countries that reference PHEIC, and 18 that reference the term pandemic, almost half do so in legislation passed from 2020 onwards. This finding is further evidence that IHR adoption in 2007 was not associated with any immediate or substantive legislative reforms. In addition, legislation changes made during the COVID-19 pandemic were often temporary and the introduced legislation might no longer be in effect. This temporality would represent a lost opportunity to enhance global health security, with the acknowledgement that some emergency COVID-19 laws created rule of law and human rights challenges.[14]

As such, we are unable to conclude that a PHEIC determination or pandemic declaration has any meaningful legal consequence. This issue is important, as it undermines the IHR—the only binding international law to combat international spread of disease. This finding reveals that a response by a member state to a concerned WHO is not required under the legalisation of most states studied. The authority of a PHEIC determination or pandemic declaration is heavily dependent on any normative power WHO holds. The effects of such declaration are reliant on non-legislative requirements nationally, such as policy or guidance documents, which have no obligations attached. Most actors overseeing national emergency declarations are heads of government, government ministers, or government-appointed officials, but not dedicated public health officials. This makes a reliance on these actors' understanding of WHO governance structures and legal mechanisms difficult and stresses the importance of protecting any existing normative power the PHEIC holds. During the COVID-19 pandemic, many heads of states did not show any awareness or consideration of the PHEIC, IHR, and their state party obligations. Evidence that PHEIC does hold normative power domestically comes from our sub-national analysis of federal systems, such as the US federal system. In 20 US states, state governors referenced the PHEIC determination in their state of emergency legislation and 18 referenced the term pandemic. This result shows the normative power WHO declarations can hold—the declarations were used by the governors to validate decision making, despite having no legal position at the sub-national level.

Overall, our findings remain alarming for global health governance. We recognise the need for further analysis of the context in which current PHEIC or pandemic language is used and PHEIC's legal standing

within existing provisions. We also see the need for further analysis of the normative power of the PHEIC and pandemic language in policy documents, national guidelines, and within governments, which could be done as a follow-on project. Our research begins the process of quantifying the extent to which a PHEIC determination or pandemic declaration is relevant to national health responses. Existing literature or anecdotal assessment frequently asserts their significance, yet our findings suggest otherwise.

This observation raises key questions as WHO is amid the process of amendments to the IHR, including Article 12, and the ongoing parallel process within the Intergovernmental Negotiating Body to negotiate a pandemic agreement. To succeed, WHO must recognise the apparent legal weakness of the PHEIC mechanism and pandemic declaration in spurring national responses before agreeing to related amendments and developing new binding terminology in relation to a pandemic emergency. One key area for consideration is exactly how to combine the existing PHEIC and new legal language concerning a pandemic. Recognising the limitations of the PHEIC and pandemic terminology will help ensure revisions address underlying problems and promote consequential change. Otherwise, WHO risks creating legal mechanisms with restricted application and experiencing a repeat of the delayed responses by states to future health threats. At the same time, WHO must preserve the existing normative power of the PHEIC and protect the decision making process from erosion by political and economic interests.[2] Reliance on this normative power makes such protection necessary, particularly when the PHEICs' legal significance in national legislation remains doubtful. The same applies to any future pandemic agreement. Instilling accountability in mechanisms to maximise national engagement will strengthen global health governance, promote rapid response, and ultimately mitigate the spread of emerging pathogens. Understanding the implications of the language used in legislation and what it might mean in practice is important.

Contributors

CW conceptualised the project. LS collected the data. LS and CW analysed the data and drafted the manuscript. Both authors approved the final version of the manuscript.

Declaration of interests

CW sat on the International Health Regulations Review Commitee for amendments to the IHR and reports consultant fees from WHO, unrelated to this research.

Editorial note: The Lancet Group takes a neutral position with respect to territorial claims in published maps and institutional affiliations.

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