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Pandemic: a limited concept for dealing with the public health emergencies that lie ahead

Pandemia: um conceito limitado para lidar com futuras emergências de saúde pública

Pandemia: un concepto limitado para afrontar futuras emergencias de salud pública

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Abstract *It is argued that there is a need to question the appropriateness of the concept of "pandemic" to enhance responses to global public health emergencies. Drawing from the context of COVID-19 and without overlooking previous outbreaks (such as H1N1 in 2009, Ebola in 2014, or Zika in 2016), attention is directed towards the symbolic, political, and sanitary power associated with pathogens attaining "pandemic" status, often at the expense of other pathogens and non-communicable diseases. This discourse invokes Susan Sontag's notion of metaphors. Advocacy is made for the greater suitability of the term 'Public Health Emergencies of International Concern,' notwithstanding the need for heightened transparency and consistency in its attribution. Moreover, it is asserted that the success of fair, equitable, and integrated responses, both in the global north and south, requires much more than mere designations. What is lacking are concrete actions and commitment to health and well-being.*
Key words *Pandemics, Pandemic preparedness, Syndemic, Social determinants of health*

Resumo *Argumenta-se quanto à necessidade de questionar a adequação do conceito "pandemia" para melhorar a resposta às emergências de saúde pública que o mundo irá enfrentar. Partindo da COVID-19 e não ignorando surtos anteriores (H1N1 in 2009, ebola em 2014 ou o zika em 2016), chama-se atenção para o poder simbólico, político e sanitário associado a patógenos que adquirem o estatuto de "pandemia" em detrimento de outros patógenos e de doenças não transmissíveis, recordando o que Susan Sontag designou por metáforas. Advoga-se quanto à maior adequação do termo "Emergências de Saúde Pública de Preocupação Internacional", ainda que maior transparência e consistência sejam necessárias nessa atribuição, ainda que o sucesso de respostas justas, equitativas e integradas, tanto no Norte como no Sul global, precise muito mais do que designações. O que falta são ações e comprometimento com a saúde e bem-estar.*
Palavras-chave *Pandemias, Preparação para pandemias, Sindemia, Determinantes sociais da saúde*

Resumen *Se argumenta que es necesario cuestionar la idoneidad del concepto de "pandemia" para mejorar la respuesta a las emergencias de salud pública que enfrentará el mundo. A partir del COVID-19 y sin olvidar los brotes anteriores (H1N1 en 2009, Ebola en 2014 o Zika en 2016), se llama la atención sobre el poder simbólico, político y sanitario asociado a los patógenos que adquieren el estatus de «pandemia» en detrimento de otros patógenos y enfermedades no transmisibles, recordando lo que Susan Sontag llamaba metáforas. Se defiende que el término "Emergencias de Salud Pública de Importancia Internacional" sea más apropiado, aunque se necesita mayor transparencia y coherencia a este respecto, además de que el éxito de respuestas justas, equitativas e integradas, tanto en el norte como en el sur global, requiere mucho más que designaciones. Lo que falta son acciones y compromiso con la salud y el bienestar.*
Palabras clave *Pandemias, Preparación ante pandemias, Sindemia, Determinantes sociales de la salud*

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The quest for the next pandemic: a well-intentioned effort

The world endured COVID-19 with the promise that learning would help to prepare for and respond to new emergencies. It also provided a clear idea of the costs of disruptions such as lockdowns to economic activity and employment, monitoring and treatment of other illnesses, mental health and children's and young people's learning.

The promise was that similar responses should be avoided in the future because of the syndemic nature of COVID-19, which account for the spill-over among pathogens, biotic (i.e. living parts of ecosystems including human and non-human animals, plants, and pathogens) and abiotic (i.e. non-living chemical and physical factors in the atmosphere) elements, and socio-economic determinants[1,2].

In the return to normality, the attention countries are paying to public health preparedness and response are fluctuating. Some say that the urgency of the day has changed in the face of new armed conflicts affecting international geopolitics, extreme weather events, political instability, and economic slowdown. Others are more sceptical and expect business as usual until a new outbreak threatens the day-to-day running of institutions.

This is why international agencies and many national public health institutions around the world want to prevent the issue from losing momentum. Networks, committees, advisory groups and taskforces have been created or revitalised and countless seminars, position statements and public communications have urged the world to keep up the good work[3,4].

'The next pandemic'[5] has become the catchphrase of this well-intentioned effort. The main questions that have fuelled the debate are when it will happen and which pathogen will cause it, assuming that policymakers understand that responses to public health emergencies are best managed by health systems that are resilient and better prepared in ordinary times.

But is the term pandemic indisputable?

The expression 'next pandemic' raises several issues. One is the meaning of the term pandemic. COVID-19 spread the term pandemic in the media and political and institutional discourses. It was useful because it allowed broad audiences to grasp a central concept, albeit in a lay sense, of epidemiology and understand the difference from other concepts such as epidemic and endemic.

Any opportunity to inform the public should be taken, especially when it comes to health and well-being affecting people's daily lives. But concepts are not free of controversy or variations in their applicability to specific cases, and this is also true for pandemics.

The so-called classic definition of a pandemic is the one that WHO recognised before[6] and during[7] COVID-19, which in simple terms referred to 'new viruses occurring worldwide'.

However, the classification of viruses as pandemics has not always been consistent in the face of concrete threats, as was the case of H1N1 in 2009. It was only classified as such a long time after solid evidence proved it was 'an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people'. The delay was due to WHO's addition of another criterion to the classic definition: the severity of the disease. The classic definition of a pandemic does not address criteria such as population immunity, virology or disease severity[8].

Since then, there has been an intense debate about whether the classic definition of a pandemic should be changed to include these additional terms. The debate has been polarised and positions are relatively easy to understand. Some feel that keeping the reference to only new viruses renders the concept irrelevant and in practice deprives the term of all meaning as more and more pathogens are discovered. Others consider that the inclusion of criteria such as immunity, virology or severity brings the definition of a pandemic confusingly close to other non-academic classifications, as in the case of Public Health Emergencies of International Concern (PHEICs).

PHEIC reflects the highest level of WHO concern caused by a pathogen under the International Health Regulations. Its aim is to coordinate immediate action to prevent an event from growing and eventually reaching a pandemic[6]. In simple terms, pandemics refer to the spread of pathogens, while a PHEIC refers to the harm that it can cause.

Thus, the controversies on the concept of pandemic boil down to two points. The first is the fact that there is a mismatch of epidemiological meanings depending on whether an analysis of pathogens is more academic (springing from fundamental research) or political in nature (motivated by response and preparedness). The second is the difficulty in using the same

definition for different pathogens, which in the past has led to criticism of the WHO – which it has acknowledged – from the Review Committee on the Functioning of the International Health Regulations in relation to H1N1 influenza in 2009 that there was confusion in the descriptions and definitions of specific pathogens[9].

The different meanings of disease

Attention needs be paid to the quality of definitions and the extent to which a description of a disease is affected by more or less variable or contingent meanings. Varying meanings of diseases is therefore a second issue to consider when addressing pandemics.

We cannot disregard Susan Sontag's classic writings on what she called metaphors. Drawing on cancer[10] and AIDS[11], she argued that pathogens are intrinsically linked to values, judgments and preconceptions that shape behaviours, morality, and punishment.

The most relevant aspect of her argument here is that subjective meanings of disease should not be disregarded and that they evolve over time, depending on advocacy, scientific knowledge, and their effect on daily life. In practical terms, it helps to understand why the designs and intensity of political responses to similar outbreaks can vary so greatly, although there is general consensus that risk assessment is determined by the ability of pathogens to condition everyday life and the expected functioning of societies.

The truth is that the level of understanding of pathogens, their means of transmission and contagion, the severity of the disease, the availability of treatments and the immunity of the population and vulnerable groups are valued differently in specific circumstances.

Examples

This criticism is not new and has arisen in how different outbreaks have or have not been declared PHEICs. There are three types of inconsistency[12].

One is whether the conclusions of an emergency committee are taken into account. For instance, in the 2016 Zika outbreak, a PHEIC was recommended but there was no explicit mention of a risk of international spread nor did the emergency committee state that a coordinated, international response was required. This decision contrasted with the yellow fever outbreak in the same year, which was not declared a PHEIC even though the emergency committee stated that the outbreak posed a public health risk to other countries due to international spread and that enhanced international support was needed.

The second inconsistency is the interpretation of PHEIC criteria. For instance, in the 2014 Ebola outbreak, the emergency committee decided that it met the criterion of 'requiring a coordinated international response'. However, in the 2018 outbreak, it was argued that while the 'response should be supported by the entire international community' involving the need for a coordinated international response, a PHEIC was not necessary because the existing response was 'rapid and comprehensive' and there was reason to believe the outbreak could be brought under control.

The third inconsistency lies in the criterion for determining if an event is extraordinary. For instance, in the outbreaks of H1N1 in 2009 and Zika in 2016 insufficient knowledge of the viruses was cited as a factor for considering them extraordinary events. On the other hand, the emergency committee never said that MERS-CoV in 2013 or even COVID-19 in 2020 constituted extraordinary events, as both outbreaks resulted from novel viruses and there were significant gaps in information on disease aetiology.

How to improve the debate

The controversies in the concept of a pandemic and contingencies in how objective criteria are used to classify outbreaks highlight warnings in the quest for the next pandemic.

It is extremely important to appraise to what extent the term pandemic is likely to bias attention to public health emergencies. There are at least three substantial biases: i) the greater weight given to communicable over non-communicable diseases, ii) the greater attention paid to viruses over bacteria, fungi and parasites and iii) the greater weight attributed to high mortality diseases over diseases that may not greatly impact mortality but can be disabling and cause comorbidities.

The argument is not that the term pandemic necessarily leads to these biases, but rather recognition that this can happen and the need for a critical assessment of the extent to which it is already conditioning post-COVID-19 life.

Antimicrobial resistance (AMR) is a good example of this concern. Although it has been on the agenda of national and international

public and health authorities, the general understanding is that advances are too timid in the face of the severity of the disease and the risks that superbugs pose to everyday life. It has long been a concern not for the future, but for the present, and it affects human, animal, and environmental life from a One Health perspective[13].

AMR has recently been referred to as 'the silent pandemic'[14], in a clear attempt to raise public and political concern. The silent pandemic is a double threat: a public health risk and an invisible danger. The expression can certainly be criticised from a theoretical point of view, but the fact that it is used and has entered the debate demonstrates something more important: the power of Sontag's 'illness metaphor'. The silent pandemic illustrates the concept of metaphor in the sense that its use highlights the need to trigger a higher level of awareness and response in policymaking, institutions, and individuals that supposedly would occur when the risk of a 'pandemic' is absent. 'Pandemic' is becoming similar to what Sontag once identified in cancer or AIDS because pathogens are weighted not necessary based on objective criteria of population immunity, pathogenicity, and disease severity, but due to the reactions one wants to create in society. No one questions the seriousness of AMR; it is a public health emergency The argument is that the reaction to other pathogens and non-communicable diseases still falls short compared to the responses when pandemic alarms are sounded.

Pandemics are mentioned to create fear in the hope that fear will push for changes that will trigger the allocation of resources and the improvement in the cost-effectiveness of treatments or vaccines. This is not advisable. Urgent action in public health emergencies should be proportional to objective criteria of population immunity, pathogenicity, and disease severity and not because they are associated with the term pandemic.

As mentioned above, the concept is involved in academic controversies that will not go away any time soon. What should matter to national and international health authorities is the extent to which an outbreak is worrying and unexpected and requires international coordination.

To this end, the PHEIC classification tends to be more direct and objective than that of a pandemic. But even when talking about a PHEIC, it is important not to overvalue pathogens to the detriment of others without epidemiological arguments and to refine the objectivity of the criteria that should motivate public health action. It is arguable that mortality is the most reliable measure of public health concern when it comes to guaranteeing the functioning of the economy, schools, and health systems in responding to most communicable and non-communicable diseases. Public health concerns are not limited to viruses and pandemics.

In fact, the resurgence of diseases once controlled or only present in circumscribed population groups, which have now spread to broader groups (such as measles), or the cyclical emergence of endemic diseases, reveal much more than epidemiological patterns of immunity. They illustrate how public health concerns inherently should link pathogens to socio-cultural, political, and environmental conditions. In recent decades, the term 'social determinants of health' has gained prominence, but in reality, it remains what Michel Foucault referred to as the 'medicine of things and space' that began in Europe in the 18th century[15].

Moreover, what we truly require are new actions and commitments, not merely words. Which epidemic or pandemic can truly be considered as not a 'syndemic'? In Brazil, where discussions about the importance of integrating traditional Public Health with the Social Sciences have been ongoing since the 1970s and considering that we inhabit one of the most unequal countries on the planet, it has long been recognized that epidemics and pandemics do not exist in isolation of social and political environments. Their effects and repercussions are inexorably linked to the characteristics of the social groups affected by them. Social inequality, climate and ecological crises, religious and cultural prejudices, among other factors, consistently determine the impact of these diseases. Brazilian researchers have not coined a new term for this understanding, but rather identified it as essential: Collective Health. Embracing additional terms (like syndemic) with colonial connotations won't significantly propel our continent towards progress in the realm of social justice. The recent emphasis that the Social Sciences have placed, within the context of Brazilian Collective Health, on topics such as racism, social inequality, and coloniality demonstrates the way in which social justice can be promoted.

Collaborations

T Correia conceived the text and both authors worked on its final version.

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