The Cost of Pandemic Preparedness
Unclear and unaffordable?

What do you need to know?

Our analysis of costings for the World Health Organization’s (WHO) proposed pandemic prevention, preparedness, and response (PPPR) instruments found that the estimates lack reliability at both the domestic and international level. Methodology is opaque, based on unevidenced assumptions, while failing to consider the effects of diversion of finances and opportunity cost.

There are, therefore, major questions regarding value for money, and indeed whether the proposed investments will produce net benefit. There is a significant concern that they will absorb a disproportionate level of global health funds, with highly uncertain levels of return.

Why do you need to know this?

The World Health Assembly will meet in May–June 2024 to vote on two proposals for reforming the role of WHO regarding pandemics: The Pandemic Agreement and amendments to the International Health Regulations (IHRs), both of which will be legally binding on States.

Unprecedented financial requests are being proposed to support PPPR. The estimates range from **US$31.1 billion a year to US$171 billion over five years** with unspecified annual commitments or **US$285–$430 billion over ten years** with additional funds of **US$10.3 to US$11.5 billion annually** sought to implement One Health.

These costs are likely to significantly distort global health and official development assistance budgets, redirecting scarce resources from global and national health priorities of greater burden (Figure 1).

<table>
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<tr>
<th>ORGANIZATION</th>
<th>TOTAL PPPR ESTIMATES IN $US BILLION</th>
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<tbody>
<tr>
<td>G20 High-Level Independent Panel</td>
<td>$171 over five years with unspecified annual funding thereafter</td>
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<tr>
<td>WHO/World Bank</td>
<td>$31.1 annually</td>
</tr>
<tr>
<td>McKinsey &amp; Co.</td>
<td>$285–$430 over ten years with $20 to $50 annual funding thereafter</td>
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<tr>
<td>World Bank to add One Health</td>
<td>$10.5–$11.5 annually</td>
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Accurate and reliable cost estimates are essential to guide decisions of Member States on whether to support PPPR investments. A re-analysis, based on a review of key underlying assumptions and including consideration of the place of PPPR within the broader public health sphere, would provide more clarity regarding expected costs and benefits.
Method

We analysed the data and evidentiary material cited within four key documents G20 (n=1), joint World Bank and WHO (n=1), and WHO Secretariat (n=2) as well as the primary (n=1) and secondary (n=10) sources cited in the policy documents to support their claims. Our analysis focused on the robustness of the cost estimations and whether the associated financial recommendations are justified as having an appropriate return on investment to support the current pandemic preparedness agenda.

Concerns resulting from our analysis

There is a general lack of accurate PPPR cost estimations due to inconsistent definitions about what constitutes pandemic preparedness, and inconsistent monitoring and reporting mechanisms.

Estimates are based on a small evidence base that is self-referential and under-scrutinized, creating a circular evidence and citation base resulting in a false perception of rigor, counter-verification, and consensus.

Claims of return on investment use problematic and crude baselines for comparison and fail to properly examine wider economic impacts and disease burdens, thus creating a false perception of value for money.

Return on investment estimates are further based on highly unreliable assumptions of outbreak risk and the effectiveness of proposed interventions. For example, the models examined assumed that:

- PPPR can mitigate 100% of all economic impacts from an outbreak (although HLIP later reduced this to 75%).
- A “Covid-like” outbreak will occur every 40 to 50 years.
- A vaccine that stops transmission is developed within one to three years.
- Economic impacts are all directly a result of an outbreak without disaggregating direct costs (hospitalizations, therapeutics, lost income due to illness and death) from indirect costs associated with policy responses (lockdowns, travel bans, stimulus injections).

The estimates fail to consider significant associated opportunity costs threatening to shift scarce resources from greater disease burdens with resultant negative health outcomes.

The estimates constitute anywhere from 25% to 40% of current global official development assistance for health (ODA), representing a disproportionate investment for an unknown future disease burden with questionable value for money. This defies traditional practices in public health, which would weigh any benefit of pandemic prevention against other disease burdens and health financing needs (Figure 2).
Figure 2. Comparison of global official development assistance (ODA) proposed for PPPR, in comparison with total global health ODA during and before the COVID-19 outbreak

<table>
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<tr>
<th>Organization/Initiatives</th>
<th>PPPR Estimated ODA (US$)</th>
<th>PPPR as % of 2022 ODA</th>
<th>PPPR as % of 2019 Pre-Covid ODA</th>
</tr>
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<tbody>
<tr>
<td>G20 HLIP (basic)</td>
<td>$15 billion per year</td>
<td>38.3%</td>
<td>67.6%</td>
</tr>
<tr>
<td>McKinsey &amp; Co.</td>
<td>$9.6 billion per year</td>
<td>24.4%</td>
<td>43.2%</td>
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<tr>
<td>WHO/World Bank</td>
<td>$10.5 billion per year</td>
<td>27%</td>
<td>47.2%</td>
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<tr>
<td>Tuberculosis</td>
<td>$1.1 billion in ODA in 2022 (actual)</td>
<td>2.8%</td>
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<tr>
<td>Malaria</td>
<td>$2.4 billion in ODA in 2021 (actual)</td>
<td>6.1%</td>
<td></td>
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<tr>
<td>WHO total budget</td>
<td>$3.9 billion in ODA in 2022 (actual)</td>
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This represents massive under-investment when compared to PPPR estimates for ODA and relative disease burdens.

Recommendations

1. There is a clear need to commission better baseline and preparedness cost estimations to accurately determine the scale and potential trade-offs of the pandemic preparedness financing required.

2. An appropriate determination of financial need must weigh these costs against other priorities in global health as well as country level disease burden needs.

3. Understanding relative disease burden and economic impacts is crucial for identifying the cost–benefit and return on investment of pandemic financing as well as how to best select interventions that promote overall public health outcomes.

4. Given the poor evidence and analysis underlying pandemic cost and financing requirements, it is prudent not to rush into new pandemic initiatives until underlying assumptions receive proper assessment.

5. WHO Member States should support proportional pandemic preparedness efforts based on substantiated investment need, careful deliberation, and rational reflection. This does not appear to be in place or addressed in current proposals.

We need balanced, evidence-based investment

The full REPPARE research report is available on our webpage. Or contact Professor Garrett W. Brown g.w.brown@leeds.ac.uk or reppare2023@gmail.com.

Study supported with funds from the Brownstone Institute, USA.