Analysis of the mass media coverage of the Gates Foundation Grand Challenges in Global Health initiative

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ABSTRACT

The Grand Challenges were launched in 2003 by the Gates Foundation and other collaborators to address the health needs of developing countries. This paper outlines the current problem with health research and development in the context of inequality as conveyed by the 90/10 divide. The paper then looks at the focus and nature of press reporting of global health issues by analysing how press articles have portrayed the Grand Challenges in Global Health initiative. Analysis of the mass media illustrates that the focus of reporting on the Grand Challenges tends to be on utilitarian themes, leaving issues related to justice and equity comparatively under-reported.

The world today is battling with gross health inequality. It is estimated that 80% of global disease burden occurs in developing countries, (disability adjusted life years). With regards to healthcare, 87% of global expenditure on healthcare in the 1990s was devoted to 16% of the world’s population, targeting 7% of global disease. There is not only inequality in health and healthcare but also in medical research and development (R&D). The Commission on Health Research Development has estimated that 90% global research and development is dedicated to 10% of the world’s diseases burden. Health research has failed to address developing countries where diseases and health burdens attract no financial return for R&D. This is a consequence of the “for-profit” model that is dominating medical research. Governments of poor countries cannot afford to pay for drugs so developers do not invest in producing them. For example, 16 of the 1393 new drugs and chemical products developed between 1975 and 1999 were for tropical diseases and TB. A team of researchers from Médecins Sans Frontières concluded “despite an ever-increasing need for safe, effective and affordable medicines for the treatment of these [tropical] diseases, drug development has virtually stopped”. It seems that medical R&D has been subject to the “invisible hand” of neo-liberal economic ideology, whereby competitive market forces have had a dominant role in setting research agendas rather than need.

The Grand Challenges in Global Health initiative was launched in 2003 by the Gates Foundation in partnership with the National Institute of Health. The initiative was created “to help researchers achieve the scientific breakthroughs needed to prevent, treat and cure the diseases of the developing world” by supporting the research of projects that address the 14 Grand Challenges as shown in box 1. The aim of the initiative is to apply scientific technology and innovative advancements to the greatest health problems of the developing world. The mass media plays a pertinent role as a vehicle for mass communication. The mass media allows information to be rapidly transmitted across wide audiences, both nationally and internationally. Public awareness about global health inequality is an important step in providing ammunition for advocacy to policy makers and governments. The position taken here is that sustainable solutions to addressing health inequality lie in effective international cooperation and collaboration, which in turn relies on effective policy. As such, political advocacy can play a crucial role, but this requires awareness and understanding of the issues facing the developing world; this is where the mass media can play its part. The aims of this paper are to examine how the mass media discuss global health issues by examining the focus and nature of media coverage of the Grand Challenges in Global Health.

METHODS

Search terms (see box 2) were selected and entered in the Lexis nexis news service, a database of all UK national newspapers, as well as international and regional news providers, journals and magazines. The terms were searched within all UK, African and US papers. No set time frame was applied. Articles which met the criteria Grand Challenges AND [Gates OR Global Health] were downloaded and screened. There were 59 UK articles, 248 African articles and 366 US articles available for screening. Terms for exclusion were developed (see box 3) and articles which met the exclusion criteria were discarded. Journal articles were also discarded. After exclusion, articles were screened for duplicates which were also discarded, leaving 10 UK articles, 115 African articles and 105 US articles. A sample size of 80 articles is considered an adequate number for analysis according to media research guidance. In order that a total of 80 articles were made available for analysis, 35 African and 35 US articles were randomly selected. All 10 UK articles were included (see table 1). Ten articles were read and a coding frame developed, which was then applied in the analysis of all articles.

RESULTS

Media articles on the Grand Challenges in Global Health initiative were analysed for the following selected areas:
**Global medical ethics**

**Box 1 The 14 Grand Challenges**

1. Create effective single-dose vaccines that can be used soon after birth.
2. Prepare vaccines that do not require refrigeration.
3. Develop needle-free vaccine delivery systems.
4. Devise reliable tests in model systems to evaluate live-attenuated vaccines.
5. Solve how to design antigens for effective, protective immunity.
6. Learn which immunological responses provide protective immunity.
7. Develop a genetic strategy to deplete or incapacitate a disease-transmitting insect population.
8. Develop a chemical strategy to deplete or incapacitate a disease-transmitting insect population.
9. Create a full range of optimal, bioavailable nutrients in a single staple plant species.
10. Discover drugs and delivery systems that minimise the likelihood of drug resistant micro-organisms.
11. Create therapies that can cure latent infection.
12. Create immunological methods that can cure latent infection.
14. Develop technologies that allow assessment of individuals for multiple conditions or pathogens at point of care.

**Box 2 Search terms for inclusion**

- grand challenges
- Gates
- Bill Gates
- global health

**Themes**

Articles were analysed for themes of interest within the context of this paper or which were recurring throughout the articles. After screening 10 articles, five themes were shortlisted for counting. The remaining articles were then analysed for these chosen themes. Each theme was recorded once where it featured in the same paper more than once (see table 4).

The most common theme found was description of the initiative. For example:

The Grand Challenges for Global Health pledged $436.6 million (including $31.6 million from British and Canadian sources) toward solving some of the world’s worst health problems. Preliminary funds have been granted to 43 groups attacking 14 challenges. (Christian Science Monitor, 12 Jan 2006)

The articles were analysed for the number of references made to the importance of taking the physical, cultural and social settings of developing countries into consideration, as well as the importance of engaging thinkers from developing countries. The sample was also analysed for frequency of citing the initiative as coordinating “new”, “innovative” and “ground-breaking” projects, inferring that the scheme was launching into untouched territory within the scientific community, researching areas that have never been looked at before. For example:

…the project is one of the 43 “groundbreaking” research projects to improve health in developing countries. (Health Business Week, 29 July 2005)

The initiative has offered grants totalling US$436.6 million for a broad range of innovative research projects. (Asia Pulse, 12 May 2006)

A particular interest is whether the articles had directed attention, in any form of discussion, to the 90/10 divide and inequality in R&D. The number of references to the theme of justice and inequality was investigated.

Another theme for analysis was criticism of the initiative. Each criticism was recorded once where it featured in the same paper more than once. A separate count was given to a different criticism if it appeared in the same paper. Finally, a specific research question in the media analysis was to ascertain whether there had been undue focus on the big-three killers of the developing world—AIDS, TB and malaria—in comparison to other global health threats. Articles were analysed for every

**Box 3 Search terms for exclusion**

- grand challenge cup
- robots
- robotic supercomputing
- computerworld sports news
- guitarists
- vehicle-race
- terrorism

**Motivations and justifications**

On analysis, motivations for the initiative, as conveyed in media articles, were broadly summarised into nine categories. The most commonly cited motivation was to improve public health in developing countries (see table 2).

**Voices and actors**

Articles were analysed for all individuals, bodies and organisations cited, all of which were included in the count. One count was given to each voice mentioned in one article irrespective of the number of references, unless the same voice was cited in the same article but in a different context or argument. Particular focus was given to international bodies involved with international policy, (namely the World Health Organization, World Trade Organization, World Bank, World Economic Forum, United Nations), Pharmaceutical industry, (either mentioned collectively, eg, “pharmaceutical companies” or as individual named bodies, eg, “Merck”), Universities, and governments or politicians. All other voices and actors, (such as scientists, researchers, NGOs), were recorded as “other”. The following were excluded from the count were: Bill Gates, Melinda Gates and The Gates Foundation. References were made almost indefinitely to these in all articles, such that little merit would be gained from inclusion in the analysis. See table 3.
area of research specified. References to AIDS, TB and/or malaria were noted. All other references, such as research into better diagnostic devices, GM mosquitoes, enhancing nutritional value in cassava and heat stable vaccinations, were recorded as “other”. Table 5 shows the results of this separate comparison analysis.

**DISCUSSION**

**Ethical motivations: justice and utility**

This media analysis on the Grand Challenges initiative indicates that there are certain areas the press has chosen to focus on in their reporting. The motivations, according to the initiative itself, are to address the currently skewed direction for R&D of health products and technologies, and to “transform” health in developing nations and “save millions of lives”. Underpinning the latter motivation are utilitarian incentives of maximising wellbeing for the greatest number, where the benefits of research for health, and therefore wellbeing, are to be received by all in the international community. It seems the former appeals to philosophical principles of justice, where distribution of research according to need is the motivation behind applying scientific innovation to the neglected majority of the world’s population. These results show the most frequent ethical motivation cited in the press is that of utility, which received 51 references. Issues of justice and resolving inequality were reported only 15 times. Given the seemingly reasonable claim that health research is currently victim to gross inequality, as demonstrated by the 90/10 divide, it is noteworthy that the mass media has not chosen to focus more on this as a motivation. One possible explanation is that utilitarian incentives of improving health for the millions in developing countries create a more captivating news story than issues of justice and fairness. This demonstrates how the media has favoured attractive themes over what intuitively seem more important. Philosophically, it has been recognised that utilitarian perspectives risk ignoring and even enhancing inequalities. The reality is that a significant dimension of the health problems of developing countries is the consequence of a global R&D set up which is grossly dysfunctional, operating on profit-driven incentives rather than need. Morally this seems to create a stronger sense of discord. Yet the press clearly must operate autonomously within its own independent agenda, which is primarily governed by a need to create profit. This may explain why utility has received greater attention than justice and fairness.

Another possible explanation for this finding may be rooted in the nature of the ideologies. While the issue of justice and inequality seems to support a stronger motivation on moral grounds, the potential to address it is less appealing. Improving health on utilitarian grounds seems more practical, tangible and therefore more rewarding. Conversely addressing injustice and inequity is an intangible goal which requires adjustments in social values. This illustrates that there is a difference in the very nature of these two philosophical ideologies when it comes to their potential for application on a practical level. As far as the media and the public are concerned, it is hardly surprising that it is easier, and thus more desirable, to imagine the benefits of utilitarian outcomes such as “saving millions of lives” rather than restoring inequity, which is more difficult to both describe and visualise. It is well supported by social researchers that the media benefits from incorporating an understanding of human psychology, so that the target audience is receptive to the information given. In theory the media is useful in conveying important political messages, however, in reality it exists as a profitable enterprise, and this core factor conflicts with its potential to include pro-social content, which inevitably attracts smaller audiences and thus compromises profits.

**The potential for universities**

Regarding the various voices and actors reported in the sample, by far the most cited are universities. One explanation for this is that research undertaken by the selected projects largely occurs at universities. Universities play a central role in biomedical research in general. In 2002, universities in the US spent $19.6 billion on medical research. This statistic, together with the results of this analysis, begs the question of whether universities, and therefore students, could play a crucial role in advocacy for global health research. This potential has already been identified by students in the US through the campaign Universities Allied for Essential Medicines (UAEM). UAEM claims: “As major contributors to drug development, universities are uniquely positioned to influence the way lifesaving medical technologies are developed and deployed”, and is calling for universities to step up research for neglected diseases.

**Table 1** Media articles on the Grand Challenges in Global Health initiative

<table>
<thead>
<tr>
<th></th>
<th>Total articles found</th>
<th>Total articles analysed after exclusions and random selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK papers</td>
<td>39</td>
<td>10</td>
</tr>
<tr>
<td>African papers</td>
<td>248</td>
<td>35</td>
</tr>
<tr>
<td>US papers</td>
<td>386</td>
<td>35</td>
</tr>
</tbody>
</table>

**Table 2** Analysis of the of the mass media perceived motivations for the Grand Challenges in Global Health initiative

<table>
<thead>
<tr>
<th>Motivation given</th>
<th>UK papers</th>
<th>African papers</th>
<th>US papers</th>
<th>Total (108)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve public health in developing countries</td>
<td>5</td>
<td>18</td>
<td>28</td>
<td>51</td>
</tr>
<tr>
<td>Solve global health problems</td>
<td>2</td>
<td>8</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>Reduce inequality</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Response to current lack of funding</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Personal emotive reasons</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Improve quality of life</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Demand from scientific community</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Security upshot for western countries</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Economic interest, eg, trade potentials</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
are several ways universities could apply themselves to the cause of R&D inequality. Needs-based policies could be instigated when considering biomedical research decisions; greater attention to neglected diseases could be promoted, as exemplified by $30 million investment into the Duke Global Health Institute. Universities could also reflect on the possible application of new or deferred research products to neglected diseases through annual review practices. UAEM has identified the currently untouched aptitude for universities to serve as influential players in the plight to restore the skewed research distribution. The campaign has been brought to the UK through Medsin.

**Importance of international bodies and politics**

International organisations were mentioned comparatively infrequently in the sample. Of the 516 references, 31 were of international organisations such as the WHO. One example is:

> The foundation regularly invites experts from the WHO to brainstorming sessions in Seattle, and has hired experts from the Centers for Disease Control and Prevention and nonprofit groups. *(Associated Press Financial Wire, 27 June 2006)*

This is interesting given that closer regulation of global R&D depends on the work of international organisations such as the WHO. The analysis also shows that politicians and governments are infrequently cited in press reporting. One article stated the following:

> Much more is needed, including political leadership and a systematic approach to incorporating science and technology innovation into our development assistance program(me)s. *(National Post (Canada), 26 April 2007)*

A possible reason explaining the scarce mention of politicians in the media reporting could be that discussing the heavy topic of the politics of health inequality would not yield the most captivating story in a newspaper. Once again the fact that the mass media cannot escape the effects of market forces seems to have influenced the focus and nature of press reporting of the Grand Challenges. The upshot of this is that the mass media is failing to convey the importance and relevance of politics to global health. Sustainable solutions to global health inequality are rooted in policy. It can be argued media reporting is relevant to policy because the public has a role in influencing government behaviour, (given the incentive to attract votes), and public awareness is fundamental to this process, which is in turn affected by the mass media. This is supported by Panos, which is part of a global network of independent NGOs working with the media to stimulate debate on international development. Their paper concludes that the mass media can play a role linking research and policy, and “enable dialogue around research as well as promote debate, accountability and commitment to research findings and recommendations.” These results indicate that the media could, and should, do more to convey the important message that long-term solutions to global health inequality lie in better governance and policy.

**Popular themes**

Regarding themes cited in the sample, these results indicate that the press has given greatest attention to describing the nature of the initiative and its research projects. The importance of tailoring research methods to the needs of low-income countries is not to be underestimated, and press reporting has demonstrated commendable efforts in highlighting the importance of contextual factors in global health research, by drawing attention to social, cultural and practical features of health tools. The mass media has reported an appreciation of the wider contextual factors that present barriers to healthcare for people in developing countries.

The fact that 60 references to the initiative being “ground breaking”, “new” and “revolutionary” while 34 references were made to inequality and the 90/10 divide indicates that the mass media directs more attention to highlighting its “ground breaking” nature than discussing the underlying reasons behind global health inequality and the currently skewed direction of R&D. The explanation proposed above for favouring utility over justice could serve as a reason for this as well.

Interestingly, and contrary to the views of some, the big-three killers—AIDS, TB and malaria—have not received disproportionately greater attention in the sample in comparison to other research areas. Some international health experts have expressed concern that vertical focus of these three infectious diseases has the potential to exacerbate global health problems by diverting resources, funding and research away from other areas, such as investing in healthcare systems, increasing access to healthcare, and other diseases which are.

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**Table 3** Type of organisation mentioned in the analysed articles

<table>
<thead>
<tr>
<th>Voices and actors</th>
<th>UK papers</th>
<th>African papers</th>
<th>US papers</th>
<th>Total (516)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>12</td>
<td>129</td>
<td>141</td>
<td>282</td>
</tr>
<tr>
<td>Universities</td>
<td>13</td>
<td>63</td>
<td>57</td>
<td>133</td>
</tr>
<tr>
<td>Government and politicians</td>
<td>2</td>
<td>29</td>
<td>20</td>
<td>51</td>
</tr>
<tr>
<td>International bodies</td>
<td>3</td>
<td>12</td>
<td>16</td>
<td>31</td>
</tr>
<tr>
<td>Pharmaceutical industry</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>19</td>
</tr>
</tbody>
</table>

**Table 4** Recurring themes of the analysed articles

<table>
<thead>
<tr>
<th>Theme</th>
<th>UK papers</th>
<th>African papers</th>
<th>US papers</th>
<th>Total (241)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of nature of Grand Challenge</td>
<td>7</td>
<td>19</td>
<td>53</td>
<td>79</td>
</tr>
<tr>
<td>Need for understanding issues in context of developing countries</td>
<td>1</td>
<td>30</td>
<td>29</td>
<td>60</td>
</tr>
<tr>
<td>Research new &amp; innovative</td>
<td>8</td>
<td>18</td>
<td>25</td>
<td>51</td>
</tr>
<tr>
<td>90/10 divide/neglected diseases</td>
<td>6</td>
<td>9</td>
<td>19</td>
<td>34</td>
</tr>
<tr>
<td>Criticisms of initiative</td>
<td>0</td>
<td>5</td>
<td>12</td>
<td>17</td>
</tr>
</tbody>
</table>
deemed even more neglected, such as schistosomiasis, sleeping sickness, Chagas disease and leishmaniasis.\textsuperscript{11} These results suggest that the media articles analysed have not focused inappropriately on the three killers; in reality other areas of research have been mentioned.

Mass media portrayal of the initiative is largely positive. This finding is interesting as it is not the case that the initiative is free from scrutiny amongst critics. It has been argued the narrow focus of its projects fails to execute the most efficient and effective solutions to global health issues, and that resources are being drained away from sustainable solutions, such as better political and social infrastructure, and investing in better healthcare systems in developing countries.\textsuperscript{12} This position is taken below:

The foundation is not focusing on chronic diseases or on health-systems research that might bolster community medical care and produce more immediate gains.\textsuperscript{(USA Today, 28 June 2005)}

Other criticisms mentioned are that innovative technology will not provide a blanket solution to problems facing the world’s poor, and that such philanthropic endeavours could themselves “pose challenges by shifting responsibility away from government and onto the private sector” (\textit{Associated Press Financial Wire, 27 June 2006}). These findings suggest that the utilitarian aim of improving global health is not the subject of criticism; indeed it would be difficult to argue against the underlying motivation of improving health for those in developing countries. Rather, criticism is rooted in whether the initiative is correctly engaging in the most effective way of achieving the desired utilitarian goal of maximising wellbeing for the greatest number in the developing world.

It would be interesting to compare how the articles from the US, Africa and UK compared in their reporting of the various themes. An analysis of this is outside the scope of this paper, leaving this as a potential for further research.

\textbf{CONCLUSION}

This analysis provides an insight into the areas the mass media has focused on when reporting the Grand Challenges. The key conclusions provide a broad message on how the mass media portrays global health issues, and the various factors that govern this. The results of the research can be applied to ignite a wider discussion on the potential role the mass media can play in conveying important political messages. In the same way that global R\&D is subject to market forces, so, it seems, is the mass media, and this analysis indicates how these market forces may influence the content of press reporting. Matters surrounding social values, fairness and equity are seemingly compromised. Mahatma Gandhi once said “I believe in equality for everyone, except reporters and photographers”. Given the huge potential the media has to change the landscape of our political thought for the better and for the benefit of the world’s disadvantaged, this sentiment seems somewhat groundless. The press should be encouraged to convey messages addressing social values that favour the plight of the world’s poorest.

\textbf{Acknowledgements:} This research project was conducted under the supervision of M Parker at the Ethox Centre, University of Oxford, to whom I am grateful for ongoing support and advice when writing the paper. Ideas and thoughts were developed after presenting the media analysis findings to the Ethox Centre. I am grateful for the discussions had, and would like to thank T Hope for his advice and input, as well as L Brown for her assistance in conducting the media analysis. I would also like to thank A Newson, who served as my local supervisor at the University of Bristol, for her longstanding advice.

\textbf{Competing interests:} GV is a member of the voluntary student organisation Medsin, and is actively involved with Universities Allied For Essential Medicines, UAEM.

\textbf{REFERENCES}


\begin{table}[h]
\centering
\caption{Results of the separate comparison analysis}
\begin{tabular}{|l|c|c|c|c|}
\hline
R\&D specified & UK & African & US & Total (278) \\
\hline
“The big-three” & 13 & 44 & 55 & 112 \\
Other & 15 & 56 & 96 & 167 \\
\hline
\end{tabular}
\end{table}
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*J Med Ethics* 2009 35: 163-167
doi: 10.1136/jme.2008.025353

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