

Countering COVID-19 anti-vaccination propaganda

Harris Zainul
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Executive summary

In preparation for a COVID-19 vaccine, the government needs to be proactive in laying the groundwork towards the twin goals of simultaneously increasing the public's awareness on the need to vaccinate; while reducing the potential implications of anti-vaccine propaganda.

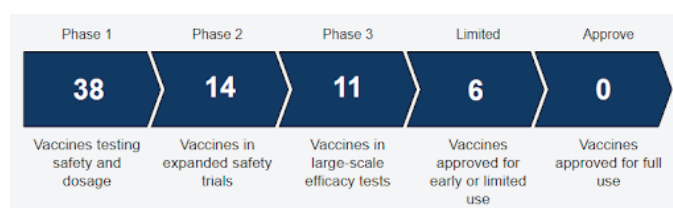
While we do not yet know the exact impact of anti-vaccine propaganda on the public's decision to vaccinate, the risk of even a minority segment of the population being hesitant and/or flatly rejecting vaccination attempts can severely undermine our efforts to create a national herd immunity towards COVID-19. In turn, this can have knock-on implications on our national economic security, and even on lives.

In moving forward, there must be acknowledgements that a majority of the population believes in the need for vaccines, and among those who do not, there are multifaceted causes behind their hesitancy. This necessitates a comprehensive, yet tailored approach inclusive of (1) public communications; (2) inoculation measures; (3) fact-checking; and (4) punitive legislation.

This policy brief makes the case for, and elaborates these four areas in addressing the problem at hand.

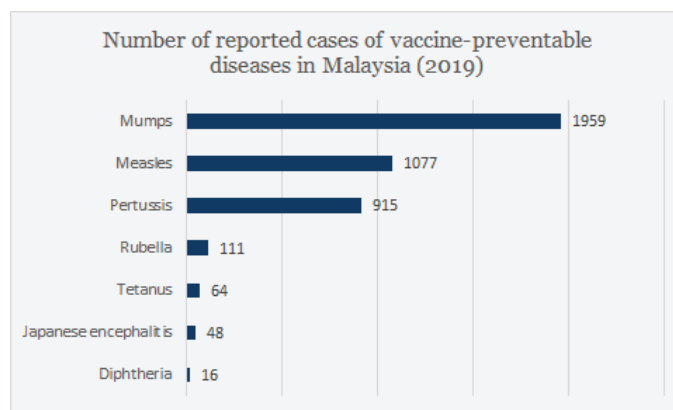
1. Introduction

As we fast approach the one-year mark since the novel coronavirus was first reported in Wuhan, China, conversations have shifted towards the discovery of a COVID-19 vaccine. At the time of writing, a new wave of optimism is sweeping around the world with the vaccine being co-developed by Pfizer and BioNTech found to be 90% effective in its trials.



Number and status of vaccines being developed worldwide. Source: Author's compilation

This, unfortunately, is taking place against the wider backdrop of vaccine-preventable diseases (VPDs) making a comeback in Malaysia, egged on by an anti-vaccination movement.¹ As it stands in 2019, there remains pockets of reported cases of vaccine-preventable diseases (VPDs) in Malaysia despite the National Vaccination Programme.



Source: World Health Organisation²

In fact, VPDs that were once eliminated in its entirety in Malaysia have also recently resurfaced, with the example being the Sabah polio outbreak in 2019; marking the country's first case since 1992 and 19 years since Malaysia was declared polio-free in 2000.³

¹ "Anti-vaccination group endangering kids' lives", 2019. New Straits Times. <https://www.nst.com.my/news/nation/2019/12/546496/paediatrian-anti-vaccination-group-endangering-kids-lives>

² "Vaccine-preventable diseases: monitoring system. 2020 Malaysia summary". World Health Organisation. https://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria%5Bcountry%5D%5B%5D=MYS#

³ "Fourth Polio Case Hits Malaysia, Unvaccinated Foreign Sandakan Boy". CodeBlue. <https://codeblue.galencentre.org/2020/03/10/fourth-polio-case-hits-malaysia-unvaccinated-foreign-sandakan-boy/>

While there are a multitude of factors behind the numbers presented above, Dr Zainal Ariffin Omar, President of the Malaysian Public Health Specialists Association had warned earlier this year that "anti-vaxxers are getting more organised, vocal, influential and is now a 'growing threat' in the control of vaccine-preventable diseases, particularly in Malaysia".⁴

With regards to COVID-19, just as how the spread of the novel coronavirus had led to a spike in outrightly false or misleading information, the potential arrival of a vaccine is no different.

To be admitted here is that we do not know the exact impact of anti-vaccine propaganda on its audience, but considering that even if a minority were to believe it and subsequently delay or abstain from receiving vaccination — this could draw out the process of achieving herd immunity longer than necessary, to the detriment of our national economic security and perhaps even lives.

2. Vaccine hesitancy

Vaccine hesitancy is defined by the World Health Organisation (WHO) as a "delay in acceptance or refusal of vaccination despite availability of vaccination services".⁵ This is a growing problem globally, and was identified by the WHO as one of the top ten global health threats in 2019.⁶

A paper published by the Ministry of Health's Institute for Health Behavioural Research in 2018 had highlighted several prominent factors associated with vaccine hesitancy among parents in Malaysia.⁷ This includes:

- Low awareness about the benefits of vaccination;
- Availability, accessibility, and affordability;
- Misconception and concern about side effects of vaccine; and
- Preference for alternative medicines.

Besides that, work done by Wan Rohani Wan Taib of Universiti Sultan Zainal Abidin on the topic highlights two others factors associated with vaccine hesitancy,⁸ namely:

- Whether the vaccine is "halal" or is prohibited to Muslims; and
- Distrust towards healthcare professionals and the government.

Taken together, these illustrate how anti-vaccination is a multifaceted issue, and is not necessarily wholly due to mis- and disinformation on the topic — although the effects of which should not be discounted.

On a positive note specific to COVID-19, anecdotally at least, it does not seem that science denialism is as dire here in Malaysia relative to some other countries, like the United States. For example, the need to wear facemasks and adhere to social distancing measures are, by and large, adhered to by a large majority of the population.

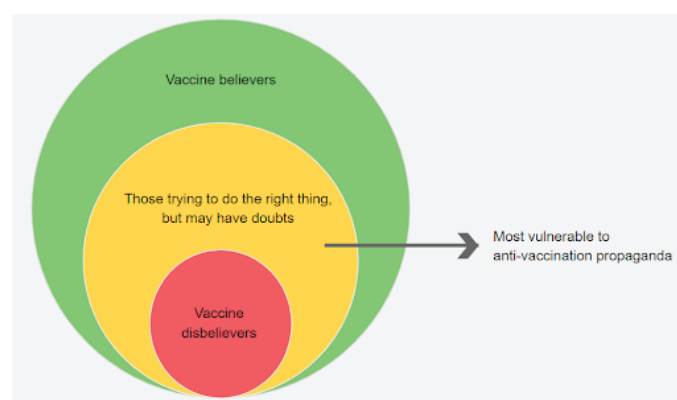
This calls for a more deliberate and targeted approach to counter anti-vaccination content.

3. Approaches moving forward

Towards addressing the problem with anti-vaccination propaganda and vaccine hesitancy, we should first consider how the general public shapes themselves vis-a-vis vaccination. This should then guide the appropriate policy measures to be taken.

With the exact numbers of vaccine-believers and vaccine-deniers in Malaysia being absent, the classification of the general public and their stand on vaccines done by Professor Kasisomayajula Viswanath, Lee Kum Kee Professor of Health Communication at the Harvard T. H. Chan School of Public Health can be taken as a rough guide.

He had opined that society can be split into three groups when it comes to vaccines:⁹ (1) a minority of staunch opponents of vaccination who are unlikely to shift their opinion; (2) a larger group of people who have been persuaded of the importance of vaccines and are just as unlikely to shift their opinion; and (3) those in the middle, who are trying to do the right thing but they have doubts and questions, and could be vulnerable to anti-vaccination messages.



Source: Author's adaptation of Professor Viswanath's classification

Based on this, a preliminary analysis that can be made is that a "soft" approach that is centred on public communications, inoculation measures and fact-checking could be adequate to insulate those in the green and yellow circles from anti-vaccination propaganda. Further, having too "hard" of

⁴ Activists Want Mandatory Vaccines, Say Anti-Vaxxers Spreading". CodeBlue. <https://codeblue.galencentre.org/2020/01/23/activists-want-mandatory-vaccine-say-anti-vaxxers-spreading/>

⁵ "SAGE Working Group on Vaccine Hesitancy, 2015. "Vaccine hesitancy: definition, scope and determinants". https://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf

⁶ "Ten Threats to Global Health in 2019". World Health Organisation. <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>

⁷ Albeny Joslyn Panting et al, 2018. "Potential Factors Contributing to Vaccine Hesitancy among Parents in Malaysia: An Overview". https://www.ijhsr.org/IJHSR_Vol.8_Issue.7_July2018/46.pdf

⁸ Wan Rohani Wan Taib et al, 2017. "Issues in Vaccine Hesitancy in Malaysia: A Countering Approach". Journal of Biomedical and Clinical Sciences. <http://apps.amdi.usm.my/journal/index.php/jbcs/article/view/84>

⁹ Professor Kasisomayajula Viswanath as cited by Talha Burki, 2019. "Vaccine misinformation and social media". Lancet. <https://www.thelancet.com/action/showPdf?pii=S2589-7500%2819%2930136-0>



an approach towards the middle group, whereby their doubts and questions are not addressed satisfactorily could backfire by hardening their pre-existing concerns.

Here, it bears worth considering what Yuval Noah Hariri had opined: "harsh punishments aren't the only way to make people comply with beneficial guidelines. When people are told the scientific facts, and when people trust public authorities to tell them these facts, citizens can do the right thing even without a Big Brother watching over their shoulders. A self-motivated and well-informed population is usually far more powerful and effective than a policed, ignorant population".¹⁰

Meanwhile, a "hard" approach can be justified to address the staunch opponents of vaccination, depending on the type of anti-vaccination content they create. Measures taken here should be aimed primarily at deterring, with prosecutions only being the last resort.

Position on vaccines / Policy	Public communications	Inoculation measures	Fact-checking	Deterrence and prosecution
Vaccine believers	✓	✓	✓	✗
Those doubtful and have questions about vaccines	✓	✓	✓	✗
Vaccine disbelievers	✓	✓	✓	✓

Source: Author's own

Taking the above together with the multidimensional nature of vaccine hesitancy, a comprehensive strategy encompassing public communications, fact-checking and prosecution, tailored to addressing each group is needed.

The following subsections elaborates on these suggestions.

3.1 Public communications

"A lie can travel halfway around the world before the truth can get its boots on"

-Commonly attributed to Mark Twain, but the quotation instead appears to be a descendant of a line published centuries earlier by satirist Jonathan Swift

While the quote above is commonly, but mistakenly, attributed to Mark Twain, the truth behind it is as sound today as when it had first appeared in 1710. Research done by Vosoughi et al confirms this in their seminal work on rumor cascades on Twitter from 2006 to 2017 that found "falsehood diffuses significantly farther, faster, deeper, and more broadly than the truth, in all categories of information".¹¹

This makes the case for the government to adopt a proactive communications strategy to first and foremost,

educate all levels of society on the importance and safety of vaccination. By being proactive, the government can preempt and curtail anti-vaccination propaganda and negative publicity to immunisation. This is crucial to assuage concerns stemming from the breakneck pace of which the COVID-19 vaccines are being developed currently.

Clear and consistent communication by the government is essential in building trust and confidence in the eventual vaccination programme. Among others, the government must communicate to the public:

- How vaccines work in general, and what are the expected side-effects (if any);
- How are vaccines developed, from the earliest stages to regulatory approval and the respective safeguards in place;
- What is the vaccine's effectiveness, to manage expectations of an overnight miracle cure;
- The likelihood of needing for multiple doses of the vaccine to build immunity, and the side-effects that can be expected; and
- The importance of population-wide coverage to achieve herd immunity.

Considering the multifaceted causes of vaccine hesitancy, there will be no one-size-fits-all communications that will be as effective as a tailored message for specific audiences.

In tailoring these messages to the respective audience, the government must fully appreciate community-specific concerns, misconceptions, reasons for distrust, and religious beliefs.

In delivering the message, the government needs to adopt a broad-based approach incorporating the whole of society. This follows that different stakeholders possess rapport and enjoy trust with different audiences, and by empowering them to deliver the message, this will ensure that it is coming from a credible source relative to them — despite the differences in faith, political leanings, ideologies, etc.

Those to be considered for this should include, but is not limited to:

- "Truth ambassadors"
- Community leaders at the grassroots level;
- Key opinion leaders;
- Faith leaders;
- The media;
- Celebrities;
- Public figures; and
- Politicians.

The first category above, "truth ambassadors", can be a novel way in addressing false information in Malaysia. The idea here is for otherwise "ordinary" members of the public to be trained on how to source credible information and/or fact-checks and debunks, and best practices in sharing their findings in closed and/or private groups on social media and communication applications. This will allow for the deployment of more informal fact-checkers and disseminators of authoritative information closer to the source of false information.

¹⁰ Yuval Noah Hariri, 2020. "The world after coronavirus". Financial Times.

<https://www.ft.com/content/19d90308-6858-11ea-a3c9-1fe6fedcca75>

¹¹ Soroush Vosoughi et al, 2018. "The spread of true and false news online". Science.

<https://science.sciencemag.org/content/359/6380/1146>



In terms of leveraging these groups' relative credibility and perceived trustworthiness to deliver a message, Elvis Presley's live televised polio vaccination in 1956 is a very interesting example of out of the box thinking.

Lastly, there cannot be any form of platforming of "alternative" views when it comes to the need for vaccination. Those in positions of authority and/or possessing credibility among their audience has a heightened responsibility to avoid this at all costs. Meanwhile, the government must also educate the public on why sharing information that they are unsure of—ostensibly "just in case" it is true—is not enough.

As for the media, the precedent of TV Al Hijrah hosting a panel discussion titled "Vaccines: Protection or Harm" in 2019 featuring a "freelance doctor" advocating for the latter should never be repeated.¹² In addition, the media also needs to consider long and harm before posing vaccine-related questions to those without a proper scientific and/or healthcare background.

3.2 Inoculating measures

An inoculation strategy must be considered to build society's resilience towards false information. An inoculation strategy here, similar to vaccines, works by preemptively exposing people to weakened examples of common types of false information, and the techniques that are used in the production of these misinformation to build their "cognitive immunity". This is done with hopes that when the person comes across potentially false information in his/her daily life, they will be able to spot it better and not be misled.

In terms of developing this "cognitive immunity" through inoculation, a low-hanging fruit that needs to be harvested is to **share the types of anti-vaccination false information that has been debunked.** By being proactive, we obtain the first-mover's advantage in exposing the public to the debunk and, more importantly, why the anti-vaccination propaganda is either outrightly false or misleading first. This reduces the risk of the people being misled or fooled by anti-vaccination propaganda when they come across it on social media and/or communications applications.

This would complement the strategy to create deterrence, which is ineffective in addressing those who genuinely believe in the anti-vaccination propaganda's veracity, and fact-checking initiatives that are hamstrung as a reactive exercise.

Besides that, the results of research done by Roozenbeek et al in **gamifying the production strategies of "fake news" creators is very promising.**¹³ In the game, players take on the role of a "fake news" creator with the objective of attracting as many followers as possible while also maximising credibility. Throughout the game, players are taught the commonly used strategies to spread misinformation, and

when prompted to make decisions — are rewarded with more followers and credibility if they choose content aligned with those strategies, and lose points should they indicate anything resembling ethical journalism.

Their findings provide "initial evidence that people's ability to spot and resist misinformation improves after gameplay, irrespective of education, age, political ideology, and cognitive style".¹⁴

3.3 Fact-checking

To ensure an efficient use of resources and the timely debunking of false information going "viral", further cooperation and collaboration is needed between the various government and non-governmental fact-checkers. Collaboration between the two parties here can include:

- Setting up a "common pool" of potentially false information that has been sighted by the fact-checkers, and those that were flagged by the public; and
- Cross-posting of the outcomes of the respective fact-checks to ensure the widest reach possible.

For context, the government's fact-checking initiatives include *Sebenarnya.my* and the Ministry of Communications and Multimedia's Quick Response Team (QRT); while non-governmental fact-checkers include a hodgepodge that counts, among others, the media such as *Free Malaysia Today*, *AFP Fact Check Malaysia* and *Malaysiakini*, and dedicated fact-checkers such as *Medical Mythbusters*, *Outbreak.my* and *ThisIsFact*.

Further, collaboration between governmental and non-governmental fact-checkers can also serve to leverage the unique advantages possessed by both parties. Here, the governmental fact-checkers' relative advantage is that they are able to obtain authoritative information relating to the government and its policies in the quickest manner. Having said that, it must be admitted that credibility in the government's fact-checks could potentially be affected with the ebb and flow of trust in government. This makes the case for collaboration with the media, who owing to their independence (even if relative), could be perceived as more trustworthy.

Focus must also be placed on the publication language of the fact-checks. As it stands, most of the fact-checks are published either in Bahasa Malaysia or in English, and efforts must be placed to translate these to all other major languages spoken in Malaysia. Notwithstanding the fact that Malaysians are expected to be literate in the national language, lived realities would dictate that there is no harm in also publishing the fact-checks in other languages spoken by Malaysia's plural society. Besides that, the debunks made must also be written using easily comprehensible language, and presented in an attractive format.

¹² "Doktor anti vaksin dikecam selepas muncul di TV". MStar.

<https://www.mstar.com.my/lokal/viral/2019/02/16/dr-nurulhuda-pertahankan-diiri>

¹³ Jon Roozenbeek et al, 2019. "Fake news game confers psychological resistance against online misinformation". Nature.

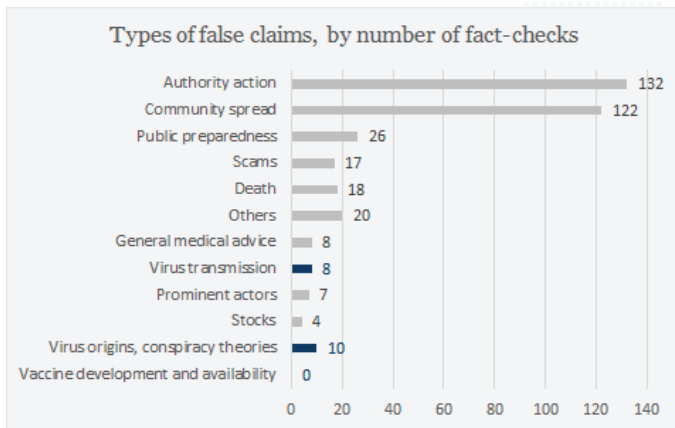
<https://www.nature.com/articles/s41599-019-0279-9>

¹⁴ Jon Roozenbeek et al, 2019. "Fake news game confers psychological resistance against online misinformation". Nature.

<https://www.nature.com/articles/s41599-019-0279-9>



Fact-checkers must be more proactive in debunking anti-vaccine content on social media and messaging applications. Based on our study and analysis of 353 individual fact-checks published on *Sebenarnya.my* between the period of January to 15 June 2020, the vast majority of fact-checks published were related to either (1) an action taken by the authorities; and (2) the spread of COVID-19 in our community.



Source: Harris Zainul and Farlina Said, "The COVID-19 Infodemic in Malaysia: Scale, scope and policy responses"

While this could be due to the priority then placed on debunking those two types of false information, moving forward, this must include anti-vaccination content. As seen in the bar chart above, not one fact-check had been made on false claims of "vaccine development and availability"; with a mere single fact-check made on the "conspiracy theory" type of claim; and only eight fact-checks related to "general medical advice" to treat COVID-19.¹⁵

Having said that, it must be acknowledged that the data was drawn from a single source, which inherently places many limitations, and we do not claim that it is a representative picture of the entire false information environment.¹⁶

Nonetheless, if the data could be taken as a rough proxy, then two inferences can be drawn: (1) fact-checking initiatives published on *Sebenarnya.my* has a blindspot, and false information relating to the three categories highlighted have not been fact-checked; or (2) false claims relating to the three categories have been relatively absent during this infodemic.

Considering the limitations of our dataset, a conclusive answer cannot be made. Nonetheless, considering how anti-vaccine trends are on the uptick generally, both government and non-government fact-checkers need to be more active in debunking this type of problematic false content.

3.4 Punitive legislation

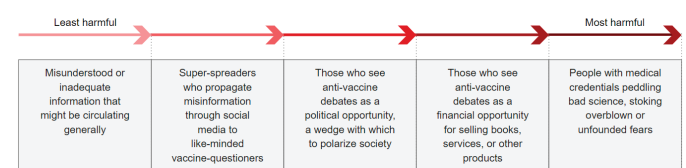
Punitive legislations should only play a complementary part of a larger strategy, and be reserved as the last resort. Here, it bears remembering that the current efforts to deter would-be creators of false information through prosecutions places ordinary people who were honestly mistaken at the risk of prosecution.

Having said that, considering how anti-vaccination false information could reasonably cause harm, investigations and prosecutions to creators of this type of false information could be justified. However, any efforts to impose punitive costs on the creators of anti-vaccine false information must factor in the twin considerations of (1) how during this dire time, people would want to take all precautions, inclusive of sharing information that they feel could be beneficial to their friends, family and loved ones; and (2) that digital literacy skills among the people, such as how to fact-check information, might not have been adequately inculcated.

Should decision-makers fail to appreciate the considerations above, it will be tantamount to placing a disproportionate onus on the people to determine for themselves what is accurate or not, and failing to make the right judgment call could expose themselves to prosecution.

In moving forward with the possibility of prosecuting creators of anti-vaccine false information, there needs to be an appreciation of the different types of anti-vaccine content and the respective harms it may cause. In determining these considerations, we need to take into account the credibility (or lack thereof), intentions and motivations of the creator of false information along with Malaysia's unique local context.

A guide for this can be the categorisation done by Professor Heidi Larson, Director of the Vaccine Confidence Project at the London School of Hygiene & Tropical Medicine on the damage done by anti-vaccine propaganda into several levels.¹⁷



Source: Author's adaptation of Professor Larson's scale of harm of anti-vaccine false content

These considerations should guide the initial decision to proceed with prosecution or not; and if affirmative, the prosecution's strategy at court, i.e., if the false information created had caused, or was reasonably likely to have caused minimal harm — then perhaps a warning notice would suffice in lieu of a fine and/or imprisonment.

Relatedly, as I had argued in the "COVID-19 Infodemic in Malaysia" policy paper co-authored with Farlina Said, the

¹⁵ We had not specifically coded "anti-vaccination" as a type of false claim in the study, and the reason these three categories are being highlighted is because these are the categories closest to anti-vaccine narratives in terms of content.

¹⁶ For more information about the methodology and coding exercise, please refer to "The COVID-19 Infodemic in Malaysia: Scale, scope and policy responses". Institute of Strategic and International Studies (ISIS) Malaysia Policy Paper. <https://www.isis.org.my/2020/08/24/the-covid-19-infodemic-in-malaysia-scale-scope-and-policy-responses/>

¹⁷ Professor Heidi Larson, 2018. "The biggest pandemic risk? Viral misinformation". <https://www.nature.com/articles/d41586-018-07034-4>

principle of proportionality — a general principle in criminal law used to convey the idea that the severity of the punishment of an offender should fit the seriousness of the crime — needs to be kept in mind.¹⁸

Towards that end, when determining punishment, the following must be taken into account:

- To what extent was harm caused, or reasonably likely to have caused, due to the disinformation;
- How widespread was the reach of the disinformation;
- Was the creator and/or sharer of the disinformation a figure of authority, or impersonating a figure of authority;
- Was the creator and/or sharer of the disinformation part of a larger coordinated group; and
- What was the general context in which the disinformation was created and/or shared. For example, false information shared during a pandemic causes, or could reasonably cause more harm than it would during ordinary times.

4. Conclusion

With the recent announcement that the Conditional Movement Control Order (CMCO) is going to be extended for a further month, it has perhaps dawned on most people that the year will end pretty much as it had begun. Differentiating the start of the year and how it can end is that we now know what to expect from this pandemic, meaning that a failure to plan ahead is, as the saying goes, planning to fail.

Preparing the public for the arrival of a COVID-19 vaccine needs to happen now, and the government needs to use its convening power to gather all relevant stakeholders who can lend their respective expertise on this new frontline of the battle against COVID-19.

AUTHORS

Harris Zainul

Analyst

harris@isis.org.my

The Institute of Strategic and International Studies (ISIS) Malaysia

No 1, Persiaran Sultan
Salahuddin, Kuala Lumpur,
50778 Malaysia
Tel: +603 2693 9366
www.isis.org.my

 @ISIS_MY

¹⁸ Harris Zainul and Farlina Said, 2020. "The COVID-19 Infodemic in Malaysia: Scale, scope and policy responses". Institute of Strategic and International Studies (ISIS) Malaysia Policy Paper.
<https://www.isis.org.my/2020/08/24/the-covid-19-infodemic-in-malaysia-scale-scope-and-policy-responses/>