

Preventing a Coronavirus Vaccine Crime Wave

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The problem

Previous *Special Papers* in this series have noted that theft and fraud relating to medicines are enduring problems exacerbated by the pandemic. However, the coronavirus vaccine is such a major issue that it warrants special attention. A vaccine is needed urgently around the globe. When one or more emerges, they will be in short supply. Short supply and massive demand create powerful drivers for crime and can result in crime waves: This is the problem.

What we know about crime waves and how we know it

New crime opportunities cause crime. Excellent crime opportunities generate crime waves. For example, while most property crime declined substantially in recent decades, mobile phones caused a theft and robbery wave because handsets embodied the 'CRAVED' characteristics- they are Concealable, Removable, Available, Valuable, Enjoyable, and Disposable or easily fenced ([Clarke 1999](#), [Bowers and Johnson 2013](#)). The Internet caused a cybercrime wave of various crime types, with innovations (such as Ransomware) evolving along the way. These are longer-term crime waves but short-term crime waves also occur.

What we think might happen in the COVID-19 pandemic

As of September 2020, over 150 coronavirus vaccines are in development, with [9 in human trials and 3 approved for limited use](#). The world population is 7.8 billion and almost everyone will need a dose, and perhaps more than one. Production knowledge and vaccines shipments will become CRAVED hot products. When this is combined with our existing knowledge about medical product crimes, and the circumstances of the global pandemic, we may be walking into a crime storm.

Huge increases in theft and robberies can be expected, including interceptions of shipments, counterfeiting and other fraud, and black-markets (with high prices), promoting corruption and organised crime. Monetary costs will be in the billions. Human costs will arise as vaccine distribution is disrupted and delayed, and as counterfeits are used by unsuspecting victims. Vaccine distribution will be hindered and effectiveness reduced. If reinfection and virus mutations extend the vaccination process, they will potentially also extend the crime.

Theft and robberies of shipments, of distribution centres, even of individuals (depending on distribution methods) are likely to be widespread: modus operandi will vary greatly from stick-ups and hi-jacks to faking of manifests. Theft by identification fraud - individuals falsely receiving vaccination - will occur during distribution. *Espionage* to steal production details has already been reported, some [at state level](#).

Counterfeit vaccines will be widespread via the internet. The vaccine is a conversation starter for other *fraud* from investments to insurance. Let carousel tax fraud abound.

Corruption can be expected to be widespread. The [Corruption Perceptions Index](#) suggests it spans much of the world and will include: Bribes and back-handers for preferential treatment of suppliers and contracts; collaboration with diversion (theft) of shipments; political influence upon decisions including vaccine allocation. The temptation may be great even within companies and countries with decent track records.

So we expect *organised crime* to prosper and generate [systemic violence](#) in pursuit of its goals. More speculatively, there is a risk of *deliberate virus-spreading* to generate vaccine sales: for an organised crime group that acquires a vaccine stock, what better way to prime the market?

We think governments around the world will wave-through 'light touch' administration for supply lines in the hope of speeding-up distribution. This will *backfire* by hugely increasing the ease with which crime can be committed, and so will actually hinder vaccine distribution.

Overall effects will include not just the direct financial and social costs of the crimes. It will indirectly prolong the epidemic and cause deaths: Deaths of those whose vaccines were delayed; deaths of those who received a fake vaccine, and deaths of those killed as part of theft and corruption.

Some ideas in response

- *Develop rapid reviews*: There will be practitioners already voicing concerns and making preparation around existing measures to reduce medicine theft and counterfeiting. Rapid reviews of best practice and knowledge are needed to identify key problems and solutions in the context of a global vaccine. These will require multi-disciplinary teams. Reviews are needed quickly because it will be harder to put the lid back on. In the UK, interested parties might include the National Crime Agency, the Border Force, National Trading Standards, crime futures work in various government departments, and the Medicines and Healthcare products Regulatory Agency. Internationally, the World Health Organisation, the UN Office on Drugs and Crime and, Interpol might be coordinating bodies.
- *Address concentrations of crime*: All crime is concentrated, both geographically and in other dimensions. Focusing on concentrations make prevention more efficient. Strategies to [prevent repeat and near repeat concentrations](#) including geographical crime hotspots, states with known corruption problems, online concentrations of websites and types of fraud, particularly easy or popular *modus operandi*, and other concentrations, should be prioritised.
- *Avoid cutting-corners*: To avoid a backfire effect, 'light-touch' administration to speed-up supply lines should be avoided. One of administration's primary - but often unrecognised - roles is crime prevention. The backfire would result in more extensive crime plus, ironically, delayed distribution.
- *Incentivise prevention by industry*: Amazon, Facebook, Google (in relation to online sales and fraud), the pharmaceutical industry, distributors and other businesses in positions of responsibility should develop crime prevention measures. To overcome market failure - the lack of financial incentive to close loopholes - governments should actively encourage private sector crime prevention action.
- *Reduce crime rewards*: Ways to reduce profit from vaccine markets, such as open source vaccine production, may warrant consideration. This would remove the reward which motivates most of the crime.
- *Close-off vulnerabilities*: In shipment security and supply-line distribution networks should be identified and closed. Administration, including shipping manifests and bills of landing, should be secure. Secure storage of vaccines, particularly at distribution points, should be a requirement.
- *Robust identity checks*: These could perhaps be similar to those used for electoral voting, to ensure people receiving the vaccine are who they are meant to be.
- *Informational material and guidelines* : These should be circulated by government (using approved routes to sidestep fraud).
- *'Ethical hacking'*: Approaches to supply-line testing might inform improved responses.

Relevant resources and references

Crews, C., R. Spekkar, and R. Moss. 2020 (in press). Challenges of preventing counterfeit goods. UCL: Dawes Centre for Future Crime at UCL.

Elgabry, M. 2020. [Bio-crime and COVID-19](#). UCL: JDI Special Papers.

Nikolovska, M. and S. Johnson. 2020. [Covid19 and Medical Counterfeits](#). UCL: JDI Special Papers.

This is one of a series of short, speculative papers developed by the UCL Jill Dando Institute during the current pandemic. It is edited by Nick Tilley and Gloria Laycock and published by University College London. The raison d'être of the series is fully described at: <https://www.ucl.ac.uk/jill-dando-institute/research/covid-19-special-papers>