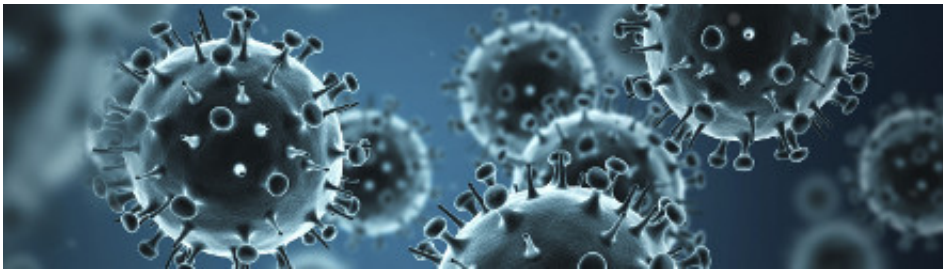


New report on the use of antiviral drugs to treat and prevent influenza

October 8 2015, by Emma Rayner



A major new national report into the use of antiviral drugs (neuraminidase inhibitors) to treat and prevent influenza has drawn heavily on two pieces of research undertaken at The University of Nottingham.

The landmark [report](#), published today by the Academy of Medical Sciences and the Wellcome Trust, concludes that anti-viral drugs called [neuraminidase inhibitors](#) (NAIs) were successful in reducing deaths in hospitalised patients. And that prophylactic use of the same drugs in households prevents flu infection.

It directly cites [evidence](#) from the Post-Pandemic Review of the anti-Influenza Drug Effectiveness (PRIDE), and a World Health Organization sponsored review of neuraminidase for rapid containment of influenza, both of which were led by Professor Jonathan Van Tam

and his colleagues in the Health Protection and Influenza Research Group in the University's School of Medicine.

Professor Van Tam said: "This report was much needed to deal with, and settle, recent controversies about when these drugs work, and when they don't; which claims about the absence of effectiveness have been over-exaggerated, and where the evidence exists and is valid. The report deals with all of the issue in an authoritative, evidence-based, and well-balanced way."

The report, *Use of Neuraminidase Inhibitors in Influenza*, examines recent reviews of the evidence for treatment and prevention using the NAIs oseltamivir (trade name: Tamiflu) and zanamivir (trade name: Relenza), considers possible future treatments and defines research priorities.

An influenza pandemic tops the UK Risk Register—above a terrorist attack or natural disaster—and has the potential to cause widespread social and economic disruption.

Although there has been much research into how to prevent and treat seasonal flu outbreaks there is very limited evidence from flu pandemics, which are significantly different due to the increased severity of symptoms and the number of people infected.

The lack of evidence has led to a controversy over the effectiveness of NAIs for treating pandemic flu and whether the UK Government was justified in stockpiling these drugs.

While the report doesn't make a recommendation on whether drugs should or should not be stockpiled, it reviews scientific evidence from trials—including PRIDE—which it says should be taken into account alongside economic, political and ethical factors when making decisions

before and during future pandemics.

The report supports the use of antivirals to treat patients who require hospitalisation, citing the PRIDE study, which showed that this significantly reduced deaths particularly if treatment was started within 48 hours of the onset of symptoms.

The evidence supporting treatment outside of 48 hours after the onset of symptoms is limited to cases of severely ill patients requiring ICU admission, while other use outside of 48 hours must rely on clinical judgement.

The steering group also recognised observational evidence from PRIDE supporting the use of NAIs of pregnant women who are hospitalised with influenza.

The report will also answer critics who, at the time, called into question the quality of evidence and impartiality of the PRIDE study.

The steering group did not support the assumption that the observational data gathered by PRIDE following the H1N1 pandemic of 2009 was of less use than randomised controlled trials (RCTs), saying that observational data can often better reflect the effectiveness of an intervention in usual care and identify rarer outcomes.

And it dismissed claims made by some researchers and parts of the scientific and popular media that funding conflicts can affect treatment recommendations. The PRIDE study was funded through an unrestricted educational grant from the pharmaceutical company F.Hoffman-La Roche which produces Tamiflu. However, the terms of the grant meant that the company had no input into the project design, no access to any of the data, no role in analysis or data interpretation, no preview of the study results and no opportunity to preview or comment on any scientific

papers arising from the research.

The steering group recognised that Professor Van Tam and colleagues had been completely transparent and rejected previous calls for the findings of the PRIDE study to be dismissed simply on the basis of its funding source.

New research on the use of antivirals in hospitalised patients and in high-risk groups in a serious epidemic or pandemic has been recognised by the report as being a priority, which could assist health professionals in their decision-making and lead to fewer hospitalisations and deaths.

Research protocols and infrastructure need to be put into place in preparation for a future epidemic or pandemic so evidence can start to be collected immediately and this ability to conduct research must be included in future scenario planning exercises, they concluded.

Provided by University of Nottingham

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