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Poster Session I

Emerging infectious diseases

INVESTING IN EMERGING INFECTIOUS DISEASES: A SYSTEMATIC ANALYSIS OF UK RESEARCH

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Objectives

Emerging and infectious diseases threaten health, security, and the global economy. However, little is known about investments in research to tackle outbreaks and innovate new tools for infectious disease control. Our objective was to systematically review the research funding for emerging infectious diseases in the UK.

Methods

We systematically searched databases and websites for information on research investments for the period 1997-2010. We identified 325,922 studies for screening, included 6,165 studies in the initial analysis, and identified 654 studies on emerging infectious diseases in the final analysis.

Results

We identified a total research investment in emerging infectious diseases of £199 million, accounting for 7.7% of a total research investment in infectious diseases of £2.6 billion. In comparison, investment in HIV research, which is not included in the total investment in emerging infectious diseases presented in this paper, amounted to £478 million (18.4% of total investment).

Diagnostic tools for control accounted for £9.8 million (4.9%) across 66 studies. Studies assessing therapeutics accounted for £20.0 million (9.9%) across 35 studies. Vaccine research attracted the least funding for tools to tackle emerging and re-emerging infectious diseases, with £11.5 million (5.8%) across 24 studies.

Hepatitis C research received the most investment with £59.7 million (30.0%), followed by prion research (including new variant Creutzfeldt-Jakob disease and Bovine Spongiform Encephalopathy) with £33.5 million (16.8%), *Campylobacter jejuni* with £24.1 million (12.1%), human herpesvirus 8 with £15.2 million (7.6%) and *Helicobacter pylori* with £15.1 million (7.6%). Although total influenza investment was £80.1 million, funding specifically for H5N1 influenza virus was £13.7 million (6.9%) and for H1N1 influenza virus was £10.8 million (5.4%).

According to the type of research along the R&D value chain, preclinical research attracted the most investment with £142.4 million (71.5%) followed by epidemiological and operational research with £42.1 million (21.2%) and product development research with £12.2 million (6.1%). Phase 1, 2, 3 clinical trials was the least well-funded type of research by public and philanthropic funding organisations with £2.5 million (1.2%).

Public funding accounted for £144.0 million (72.3%) across 361 studies with philanthropic funding awarding £40.6 million (20.4%) across 173. The major funding organisations to support this work included the Medical Research Council (MRC 26.0%), the Department of Health (DH 14.9%, predominantly on prion research), the Wellcome Trust (13.2%) and the European Commission (8.3%).

Conclusions

We present the first detailed analysis of funding awarded for emerging infectious disease research to UK institutions and their global partners. Emerging infectious diseases receives small amounts of funding compared to other scientific disciplines, with the exception of HIV. It is essential that we map, monitor and evaluate emerging infectious disease research funding given their importance to global health security.

