



Introducing Outbreak Manager from ICNET's Clinical Surveillance Platform.

Public Health Wales and all local health boards across Wales gain more power to tackle the complex challenges of managing the Coronavirus pandemic.

The impact of infectious disease outbreaks can be staggering in terms of human suffering, burden on society and economic loss.¹ Controlling the spread of infectious diseases has been a challenge with the rise of antimicrobial resistance; this has become increasingly complex with the emergence of new viral diseases such as COVID-19.

Infection prevention professionals and public health experts experience challenges in preventing, controlling and contending with outbreaks. They also face workload challenges, time pressures and psychological effects stemming from outbreaks.² Addressing the challenges of the global pandemic requires coordinated efforts at a national level as well as within local health boards.

Baxter's existing ICNET Infection Prevention solution has been in operation across NHS Wales since 2017. Now, a new product, Outbreak Manager, has been implemented nationally to provide infection preventionists and senior public health leaders with the latest workflow, analytic and data visualisation tools for all infectious disease outbreak management. The software enhances information capture through a central digital interface so that users can keep track of all relevant cases, enabling them to intervene more effectively to help minimise disease transmission.

Outbreak Manager was developed in partnership with Public Health Wales (PHW) with the aim to drive improvements in outbreak preparedness, response and management. This collaboration also means that the new product meets the best practice standards for a Tier 1 digital health technology (DHT) within the NICE evidence standards framework for DHTs.

SEEING NEW CONNECTIONS IN THE DATA

Outbreak Manager differs in several important ways from the functionality previously seen in ICNET's Infection Prevention product, which is more localised and time-limited, and focused on acute rather than chronic outbreaks.

Outbreak Manager takes advantage of a graph database meaning that all relatable connections in the data are made apparent and, in many cases, retrieved with one operation. The tool enables multiple outbreaks and all infection sources to be documented and stored in it. This means easier visualisation of chains of transmission during an infectious outbreak.

With connections, unconstrained by time or rates of occurrence, outbreaks that unfold slowly through isolated cases over long periods of time can now be seen in the data. Outbreak Manager is also designed to work with genomics to provide more insight into the genesis of an outbreak.

The software requires users to enter case definitions that would be used to identify the cases linked to an outbreak. Features are available to support the rapid and robust entry, validation and management of information to enable case finding and descriptive epidemiology. This includes case line listing, network diagrams and tools to visualise chains of transmission.

The data insights give infection control teams knowledge about the outbreak that enable them to determine where best to deploy resources to gain the best chance at containment.

Outbreak Manager also empowers investigations: How did an outbreak happen, and where did it come from? How might the next one be prevented?

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Across Wales, every COVID-19 patient is being documented by hospitals using Outbreak Manager.

Any positives for SARS-CoV-2 and MERS CoV from any location (including primary care) will appear on the daily alert feed with a case opened.

Through this wider lens, senior leaders can better visualise the progression of the outbreak, calibrate the utilisation of resources and look for trends that might apply to enable them to act quickly in the ongoing management of the crisis.

As the COVID-19 crisis phase eases, contact tracing will still be crucial for the foreseeable future and the support that Outbreak Manager will provide will be invaluable. **ICNET** will also support surveillance testing to enable PHW to monitor the current state of the pandemic which in turn will allow them to make inferences as efficiently as possible. The entire public health community will also be assessing the impact of the various interventions that were put in place during this crisis and the analysis tools in Outbreak Manager can support PHW with their assessments.

The future of infection prevention has arrived, giving those charged with outbreak management the tools they need to proactively intervene to lessen the impact of outbreaks and prevent new ones from occurring.

“Outbreak Manager is the logical next step in the evolution of our Clinical Surveillance Suite,” said Jan Brase, head of Baxter **ICNET**. “Not only is this going to clarify workflows for infection prevention professionals at both the individual hospital and public health department levels, it is going to help us to see trends in the data we have never seen, allowing us to better identify root causes of disease.”

Outbreak Manager is now commercially available so that other NHS Trusts and Health Boards in the U.K. and hospitals and public agencies in other nations can benefit and achieve better outcomes for patients while helping to lower the cost of outbreaks. Outbreak Manager can be deployed standalone or in conjunction with other **ICNET** modules from **ICNET's** Hospital or National Suites.

ABOUT BAXTER **ICNET**

Baxter's **ICNET** Clinical Surveillance Platform offers a more integrated approach to a complex challenge. **ICNET** is the only platform to provide a seamless solution across the hospital and public health settings, ensuring more people are protected.

ICNET Hospital Suite supports infection prevention professionals within the healthcare facility setting, while **ICNET** National Suite supports public health communicable disease professionals at the mass population level. Together they support a holistic approach to clinical surveillance, outbreak management and antimicrobial stewardship, with customisability to meet the specific needs of your organisation.

www.ICNETsoftware.com



References:

- ¹ Leadership Institute for Global Health Transformation. Today's challenges in outbreak preparedness: the role of surveillance. Saw Swee Hock School of Public Health, National University of Singapore. 2016.
- ² Musau J, Baumann A, Kolotylo C, O'Shea T, Bialachowski A. Infectious disease outbreaks and increased complexity of care. Int Nurs Rev. 2015;62:404-11.

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