1 NOTIFIABLE MEDICAL CONDITIONS

NICD and NDOH implement a new mobile and web APP to improve surveillance and reporting of outbreak-prone diseases in South Africa

In the face of exponential increase in travel and trade across nations and continents, the International Health Regulations (IHR) require every country to have an efficient real-time surveillance system that enables timely detection and reporting of notifiable medical conditions (NMC) for disease control. NMC such as tuberculosis, listeriosis, measles and malaria are outbreak-prone conditions, hence must be notified to the NMC surveillance system that comprises health authorities and the National Institute for Communicable Diseases (NICD). Timely detection and notification of these diseases creates opportunities for effective interventions to prevent local, regional and international disease outbreaks; category 1 NMC must be reported within 24 hours of detecting a case. Recent measles, typhoid and listeriosis outbreaks in South Africa emphasise the need for an effective NMC surveillance system. In South Africa, similar to other countries, notification of NMC is a legal obligation and the regulations governing this legal requirement were updated in December 2017 to align them with the National Health Act and IHR. These new regulations capitalise on existing public and private health systems and structures to create synergies between NMC surveillance users, whilst strengthening various aspects of NMC surveillance including real-time data collection, collation, analyses and dissemination for prompt public health responses to stop the spread of disease.

A recently-published study by Benson and colleagues conducted in 2015 to evaluate the then Notifiable Diseases Surveillance System (NDSS) in South Africa concluded that the NDSS was suboptimal; even though 92% of the 919 interviewed health care professionals reported having notified diagnosed NMC, only 51% notified correctly. Despite measles, a notifiable disease, being one of the most commonly diagnosed vaccine-preventable childhood illnesses in South Africa, the Benson study reports that paediatricians were unlikely to notify correctly. The study reported lack of association between correct notification and willingness by doctors and nurses to notify, experience or training on the surveillance system, understanding of the importance of NMC surveillance or perception of feedback. This points to a system and process barrier that could possibly be overcome by implementation of a streamlined, standardised and user-friendly notification system. This study, together with other in-house NDSS evaluations, demonstrated the need to re-engineer the old NDSS to create a new NMC surveillance system. To take forward this body of work, NICD was appointed by the National Department of Health to develop and manage the national NMC surveillance system.

In the last two years, the NICD worked in partnership with national, provincial and local levels of Health Departments and numerous stakeholders in the public and private health sectors to develop and implement an integrated and simple NMC national surveillance system that allows for rapid detection and notification of outbreak-prone diseases. This new surveillance system is in the form of a mobile and web APP and is currently being rolled out nationally, starting April 2018. The NMC APP allows nurses, doctors, laboratories and medical schemes to notify diseases at point of diagnosis with in-built SMS and email alerts. Laboratory and clinical data are merged and de-duplicated to give patient-level integrated comprehensive alerts/notifications to communicable disease control personnel. The APP also has real-time communication and feedback channels as well as an anonymised reports dashboard. Furthermore, a new paper-based notification system was launched in August 2017 to strengthen notifications in regions where there is no connectivity, and hence no ability to utilise the electronic platform. Since the inception of the new surveillance system, NMC such as TB, measles and malaria are now being rapidly notified by both the public and private sector, rendering us better able to implement effective interventions for disease control. This new NMC APP will facilitate timeous reporting of infectious diseases, hence enable implementation of targeted, efficient and timely disease control measures and thus contribute towards preserving a healthy South Africa.

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