

## Title

Development of an online results portal for laboratory results during Laboratory Information System (LIS) downtime

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## Background

Downtime of the LIS or the external results access application disrupt the reporting of laboratory results. In South Africa, NHLS laboratories still rely on paper-based or phone-based reporting methods during these events. No alternative online results portal is available during these downtimes. Results reporting during these downtimes becomes extremely difficult in our high-throughput routine laboratory and phone lines becomes flooded and laboratory staff overwhelmed by clinicians requiring results. Wordpress, an open source server-based content management system initially used for blogging, might be used to easily develop a website to make patient results available.

## Methods

An online web-based results portal was developed using Wordpress, to report laboratory results during scheduled or unforeseen LIS downtime. A shared account was created at a local hosting company at minimal cost. To manage security on the site, a highly rated free security plugin was installed and configured. To manage user access to results, an access restriction and user registration plugin was installed. To automatically present patient results in a table format, a commercial table generator plugin was used. To import patient results from the analyser's middleware in CSV format to the web site's SQL database, a commercial import plugin was used.

## Results

A simple website with a high level of security is available on which urgent results can be published in table format. Administrator privileges (for authorising user registration and loading of patient results) is done via an online portal and importing of patient results is easily automated. User registration can be done either by users themselves or by one of the administrators.

## Conclusion

With information technology and open source software, it is possible to design innovative ways to solve real world problems while optimising patient care during downtimes.