

Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Counties Manukau and Waitemata

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Submission from the Auckland Regional Public Health Service on the *EpiSurv* Functional Specification Consultation Document

1. Thank you for the opportunity for the Auckland Regional Public Health Service to provide a submission on the EpiSurv Functional Specification consultation document.
2. This submission represents the views of the Auckland Regional Public Health Service (the Service). The Service provides public health services for the three district health boards in the Auckland region (Auckland, Counties Manukau and Waitemata District Health Boards), with the primary governance mechanism for the Service resting with Auckland District Health Board. This submission represents the views of the Service and does not necessarily represent the views of the three District Health Boards.
3. The Service understands that all submissions will be available under the Official Information Act 1982, except if grounds set out under the Act apply.
4. The primary contact point for this submission is:

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General comment

5. The Service supports the general approach taken by ESR to redevelop EpiSurv as a secure, web-based application within the proposed SURVINZ platform. The Service also notes the scope of the project as being that of national data warehousing and analysis, rather than to specifically benefit local work-flows that result in data entry into the system. The Service makes the following comments and recommendations regarding specific details within the EpiSurv Functional Specification document.

Business processes

6. The Service supports the choice of major functional areas to be supported by the redeveloped EpiSurv. In addition to the functional areas identified by ESR, the Service encourages ESR to prioritise national contact tracing analysis and reporting functionality for future development.
7. The Functional Specification document describes receipt of notifications by telephone or fax (p8). Both these processes involve manual data entry. The Service recommends that ESR, during the redevelopment of EpiSurv, considers enabling users to upload case details electronically. For instance, it is possible that notifications in the future may be transmitted electronically, using secure technology such as HealthLink. Enabling electronic upload of this information to EpiSurv would improve data entry efficiency and accuracy.
8. The activity flow diagram (p9) identifies the bulk of the work in notification processing and action as occurring outside of EpiSurv/SURVINZ universe. While data validation and integrity are able to be 'forced' to some degree within EpiSurv ultimately issues of data quality and timeliness are still contingent on these external processes. Significant benefits would accrue through greater PHS work-flow integration; the Service recommends that the system architecture is designed in such a way that integration with future PHS work-flow systems can be accommodated.

Case processing

9. [3.2] The Service supports inclusion of person identification checks. Where individuals have been the subject of a previous case, updates should also allow the retention of historic data rather than a simple overwrite update (such as address or usual GP).
10. [3.3] The Service requests further information over the gathering and translation of the new NZPost postcodes as the primary area (zone) locator. Manual notification details are not able to enforce or verify postcodes. The address finding application would require some flexibility or alias function to guarantee the highest matching capability.
11. It is also noted that the previous ESR address-finding applications (GeoStan based) enabled address finding for public health records other than individual case reports, such as those for contacts and geographic locations of interest. This functionality has proved invaluable in past disease and outbreak investigations, and should be retained.

12. [3.4.2] The Service supports inclusion of the additional field “Processing Notification” within Case Investigation Status.
13. [3.4.3] The Service supports inclusion of the field “case not investigated” among the new Investigation Method fields, as this field will enable identification of cases with incomplete data collection due to lack of investigation. It will be important that the term “investigated” is defined clearly in any accompanying user manual, as interpretations of the term are likely to range from completion of case interview to completion of environmental investigation.
14. [3.4.3] The Service requests further information about the reasoning behind including fields “case contacted by phone” and “case visited”. These data would appear to have little value locally for case management audit purposes. Furthermore, any bias inherent in accuracy of information collection by the two approaches (interview by telephone or at face-to-face visit) is likely to be small, and be of little interpretable value in surveillance analyses at a regional or national level. The fields may have some value in collecting information about risks posed to staff in investigation of respiratory-transmitted or environmentally-transmitted infectious diseases.
15. [3.7] The Service supports inclusion of functionality to support epidemiologic linkages between cases. The Service recommends that this functionality should also be available for hepatitis A and for cases of measles, mumps or rubella, but may not be necessary for all enteric diseases (i.e. unlikely to be of value for campylobacteriosis notifications).
16. [3.7] The Service recommends that the redeveloped EpiSurv also includes functionality to enable recording of user-defined non-epidemiologic linkages. The most obvious example of this would be in recording linkages on the grounds of similarities of molecular microbiology of infecting organism, e.g. RFLP patterns of *Mycobacterium tuberculosis* isolates.
17. [3.11] The Service recommends that the amended list of occupations be further expanded to include sub-categories of the term ‘student’, i.e. preschool student, primary school student, high school student and tertiary student.
18. [3.12] The Service recommends that the “Specify” ethnicity field (which presumably appears if the “other” ethnicity option is selected) is made a mandatory field. At present, the Service is regularly required to analyse case notification data using an aggregate ethnicity category of “Asian”. Without a strict requirement to specify the ethnicity of cases that are not accounted for among the ethnic groups listed in the tick-box list, the ability to construct an aggregate Asian category would be restricted.
19. [3.12] The Service recommends that an “unknown” category be added to the list of tick-box ethnicity fields.
20. The Service recommends that the “Attachments” functionality (described in Outbreak Reporting, 4.3) be extended to individual case reports. Laboratory and radiology results are increasingly transmitted in an electronic format, and the value of EpiSurv as a case management tool would be enhanced if these electronic reports could be attached to, and accessible from, the case report record.

21. The Service recommends that subtyping data be linked with, and populated from, ESRLab records where available (this may already be envisaged, as per the System Scope, 1.3.). The Service particularly recommends that this functionality be made available for the *Serotype* and *Subtype* fields within the Meningococcal Disease case report form. At present, variation in recording of information in these free-text fields makes analysis of aggregate information very difficult.

Outbreak reporting

22. [4] In general, the Service supports the proposed functionality enhancements to outbreak reporting, as this area of EpiSurv is currently weak. However, this section of the Functional Specification provides little detail, and the Service is unclear whether the intention of this part of the redevelopment is to create, within EpiSurv, a tool for undertaking descriptive epidemiologic analysis of outbreaks (albeit without statistical techniques), or to simply enable recording of more detailed information on outbreaks for which descriptive epidemiologic analysis has been undertaken elsewhere. Clearly, the former option would reduce duplication of data entry. The following comments reflect on this further.
23. [4.2] The Service supports inclusion of a case listing option within the outbreak section of EpiSurv, but would like to receive more detail on the extent of information to be recorded on each case. For instance, will the case listing enable collection of all fields currently collected in the individual case report forms? If so, the Service recommends that the case listing functionality enables a user-defined selection of fields for viewing.
24. [4.2] The Service requests that ESR clarify how the case listing will relate to individual case records. Will cases listed within the outbreak 'module' then be automatically registered as notified cases? Will the case listing be restricted to cases with individual case reports?
25. [4.2] If the case listing function is independent from individual case reports, the Service recommends that the GIS mapping functionality and map tools (described in 3.3) are replicated in the outbreak module.
26. [4.5] The Service recommends that the "Import Case Data" function is accompanied by a standard tool to export case data.
27. [4.6] The Service requests more detail on how ESR considers the rapid case entry system would be used. In practice, details of cases associated with outbreaks are initially recorded so that investigators can perform descriptive epidemiologic analysis and / or to log case management. If the former is envisaged, collection of a wider range of fields, likely to be unique to the specific outbreak, would be necessary as well. If the latter, collection of case management fields will also be necessary. Clarification of the relationship between this rapid case entry system and individual case reports may also be necessary: will cases entered using this system also appear as notified cases? Rapid case entry may be of value in collection of a core information set from a large number of people in an emergency, such as an outbreak of a novel influenza virus.

28. The Service recommends that the outbreak reporting system contains automated fields that perform basic calculations drawn from listed cases (assuming all cases associated with an outbreak are recorded, as per 4.2). Examples of basic calculations that could be performed automatically are total number of cases and median age of cases.

List Management

29. The Service supports the proposed management of data sets in the understanding that applicable data will be accessible for wider public health analyses.

Analysis

30. The Service supports the proposed analysis functionality enhancements.

Reporting

31. [7.2] The Service welcomes the opportunity to contribute to the planned reporting workshop to define the list of pre-built reports to be developed and delivered within the redeveloped EpiSurv.
32. [7.3] The Functional Specification mentions a new Reporting Tool to query data for ad hoc reporting, but does not specify how this reporting tool would function. It is not clear that if PHSs will be able to write their own SQL queries through an SQL interface, and to be able to access raw data tables. If the proposed tool is similar in scope to the reporting tool in current EpiSurv, the Service will find it of limited functional benefit.
33. The Functional Specification does not describe whether PHSs will be able to connect their current tailored reporting systems to the redeveloped EpiSurv, and if this functionality is possible, how it will occur. Despite contributing to plans for pre-built reports, it is likely that PHSs will still require the ability to locally develop tailored regular reports from their regional data. The current process for extracting data from EpiSurv is largely manual, and would not be suitable for regular reporting. The Service recommends the redeveloped EpiSurv continues to allow PHSs access to their regional data in real-time using locally-developed interface packages; for example, by enabling real-time copies of the data to local servers.

System Requirements

34. [8.3] The Service notes the proposed core business hours for system availability of 7.00 – 6.00 pm Monday to Friday. The Service seeks greater clarity as to what is proposed for system availability. The Service can foresee times when a 24/7 availability might be required; such as in dealing with pandemic or if there were particular issues relating to an individual outbreak or notification. Currently a PHS has access to its own data on EpiSurv at all times. While out of hours use of the system is intermittent the Service would not like to see functionality limited to core business hours.

35. [8.6] The Service anticipates the possibility of automated system updates or uploads into EpiSurv by way of internal PHS work-flow modules, in addition to extractions out of EpiSurv. The current division of responsibility between PHS activities and ESR surveillance results in significant double handling of data, creating inefficiencies and increased risk of inaccurate data entry. Solutions to this problem require an approach in which both sets of systems are designed to be capable of integration, both now and in the future.

Conclusion

36. The Service commends the initiative taken by ESR to redevelop EpiSurv, and supports the general approach described: such a redevelopment is necessary and timely. However, the Service would appreciate greater clarity of the rationale behind some functional enhancements, and believes that incorporating its suggested changes to the specification will further improve the functionality of the resulting platform.

Yours sincerely

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