

**Library & Information Services**

**Journal Club Checklist**

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| **Title** | **Staphylococcal bacterial contamination of portable electronic devices in a large veterinary hospital**  Journal of Small Animal Practice, 62 (4), pp. 253-256. |
| What are the aims or objectives of the study? | The stated aims of this study were to determine the prevalence of staphylococcal contamination of portable electronic devices (PEDs – e.g., smart phones and tablets) in a veterinary hospital, to identify whether the source was likely human or animal (dog and cat) and to determine the pathogenesis of cultured strains.  However, part of the study involved a staff questionnaire about cleaning and disinfection of PEDs. What do you think was the aim of this part of the study? |
| Who carried out the research? | The research was carried out by a veterinary nurse working at a referral practice outside Bristol, supported by three members of staff at Bristol Vet School. |
| When and where was the research carried out? | The research was carried out between January and March 2017 at a single small animal referral hospital. |
| Is there a specific research question or hypothesis? | The stated hypothesis is that that the main source of contamination would originate from humans rather than animals.  There is also an unstated research question about how, and how frequently, staff clean their PEDs. |
| Why do you want to review this paper? |  |
| What methods did the researchers use? | BACTERIOLOGY  Swabs were taken from participants PEDs for bacteriological culture and analysis. Positive cultures were tested for resistance to oxacillin and vancomycin. A coagulase test was carried out on all staphylococci and PCR assay was used to specifically genotype the isolated staphylococci.  QUESTIONNAIRE  Staff were asked to complete a questionnaire about frequency of use along with the regularity and methodology of PED cleaning. |
| Is this methodology appropriate to the objectives or question? And are there any potential sources of bias? | Taking swabs for bacteriology is an appropriate method of assessing contamination. However, this study was only looking for Staphylococci, so other bacteria and viruses would have been overlooked.  A questionnaire is one method of finding out about cleaning habits, however it could be subject to bias for the following reasons.   * Not all staff participated in the study. * Ethical approval required that participants were informed of the purpose of the study, which may have changed their behaviour or influenced their responses to questions. |
| Is the study design described clearly enough to enable you to follow what was done? |  |
| Are the type of samples and participants clearly described? | What types and numbers of staff were included in this study? (See table 1) |
| How many samples and participants were included in the study? | Fifty (71%) of approximately 70 staff members participated. Forty-eight staff (96%) had a PED which they used within the hospital.  How many swabs were taken? |
| Are these samples and participants, relevant to your practice, if not what differences need to be considered? | Differences that you may consider are the number of members of staff and the fact that only clinical staff were included.  You may also consider whether the increased hygiene measures that have been implemented during the COVID pandemic would impact on the results. |
| Do you think that the data collected are clearly described? |  |
| Are all samples and participants accounted for in the analysis? |  |
| Are the results of the study clearly described?  What could the researchers have done to make the results clearer? |  |
| Do the results published answer the research questions? | The primary question related to the prevalence of Staphylococcal contamination of portable electronic devices and whether the source was likely human or animal.  How many PEDs were found to be contaminated? |
| What evidence do the authors put forward to support the statement that the majority of staphylococci found were of likely human origin? | The main reason given by the authors was the  species of staphylococci found, but you may also consider the high prevalence of vancomycin resistance (which is rarely used in veterinary medicine). |
| This study concentrated on contamination with staphylococci, what other organisms could be responsible for contamination in veterinary practice? | The authors mention enterobacteria can you think of any others? |
| Do the findings support or alter your current knowledge? |  |
| In terms of the frequency and method of cleaning PEDs, do you think you would get similar results in your own practice? |  |
| What other surfaces and objects in your practice are likely to be contaminated by humans? |  |
| Do you have suitable cleaning protocols in your practice for portable electronic devices and other touch surfaces? |  |
| Do the findings provide sufficient evidence for you to consider changing your current practice? |  |
| If so, what changes would you like to make in your practice? | You may like to look at the[*QI CPD: Infection Control and Biosecurity resources*](https://knowledge.rcvs.org.uk/quality-improvement/tools-and-resources/qi-cpd/#infection) on the RCVS Knowledge website. |