



Elaborated analysis

Distribution of incidents of resuscitation and death at the Juliana Kinderziekenhuis and the Rode Kruisziekenhuis

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These notes represent a follow-up to my report '*Distribution of incidences of resuscitation and death at the Juliana Kinderziekenhuis and the Rode Kruisziekenhuis*' dated May 8th, 2002 –hereafter called '*the first report*' – and is to be read exclusively in conjunction with that first report. The same method of analysis is used, for a clarification of which the first report should be consulted.

I have been asked to indicate how the first report should be amended were only those incidents taken into consideration with which Mrs. L. de B.¹ has been charged. By comparison with the first report, the charges omit the death of April 18th, 2001 at the JKZ, as well as one of the deaths at the RKZ. On the other hand, four different cases are included in the charges, notably those having occurred on February 1st and May 9th of 1997, on January 3rd, 1999 and on September 18th, 2000.

The latter four cases with which the accused is charged took place outside of the periods of time investigated in the first report. In respect of the first three of these cases, I have no details available at this time in respect of the incidence of deaths during the periods and at the wards in question at times when Mrs. V was absent. Therefore, the conditional method I favour cannot be applied to these cases.

In principle, the data required to analyse the incident of resuscitation that took place on September 18th, 2000 are available. To conduct a complete conditional analysis, however, we must abandon the choice of relating the analysis to the period over which the accused was in possession of the Specialist Nurse in Child Care diploma. I find this to be inappropriate.

Below, I will first conduct a supplementary analysis, reviewing the same period that was covered in my first report and varied only by the exclusion of the two deaths at the JKZ and the RKZ with which the accused has not been charged.

Next, I will discuss the implications of excluding from the analysis the other four cases with which she has been charged though they were omitted from the first report's analysis.

¹ Having consistently referred to the accused as 'Mrs. V.' in the first report, I will here continue with this designation.

Supplementary analysis, JKZ

For the purpose of this supplementary analysis I will first consider the same data as related to the JKZ, noting that a single incident, namely the death of a child on April 18th, 2001 is no longer classed as such². The shift worked by V on this date thus is listed 'without incident'. The equivalent to table 1 of the first report then is:

<i>Table 1 supplementary analysis:</i> <i>JKZ-MCU-1, 1 Oct 2000 – 9 Sept 2001</i>	no incident	an incident	total
number of shifts where V was present	<i>134</i>	<i>8</i>	<i>142</i>
number of shifts where V was absent	<i>887</i>	<i>0</i>	<i>887</i>
total number of shifts	<i>1021</i>	<i>8</i>	<i>1029</i>

figures given in italics differ from those included in table 1 of the first report

The chance of Mrs. V having been present by coincidence at 8 incidents, having worked 142 shifts, while no incidents occurred during the 887 shifts during which she was absent, in this scenario, too, is extremely small, being 0.000000110572 or less than 1 in 9 million. Applying the 'post-hoc adjustment', i.e. calculating the chance of one of any of the 27 nurses required to staff the MCU-1 being involved in all 8 incidents during 142 out of 1029 shifts, we derive a probability of 0.0000029854, less than 1 in 30,000.

Supplementary analysis RKZ

Performing the supplementary analysis of the data related to incidents on ward 42 of the RKZ, the same period of August 6th to November 26th, 1997 is considered. During this period, 6 incidents occurred while Mrs. V. was on duty. One of these six is not mentioned in the charges, for which reason we will proceed on the basis of the 5 incidents with which Mrs. V has been charged. Thus, out of 58 shifts worked, 53 are listed 'without incident'. In this case, the equivalent to table 2 is:

<i>Table 2 supplementary analysis:</i> <i>RKZ, ward 42, 6 August - 26 November 1997</i>	no incident	an incident	total
number of shifts where V was present	<i>53</i>	<i>5</i>	<i>58</i>
number of shifts where V was absent	<i>272</i>	<i>9</i>	<i>281</i>
total number of shifts	<i>325</i>	<i>14</i>	<i>339</i>

figures given in italics differ from those included in table 1 of the first report

The likelihood of Mrs. V having become involved *by coincidence* in *at least* five incidents during the 58 shifts worked, while a total of 14 incidents occurred during 339 shifts, in this case equals 0.07155922

² The incident in question did take place while Mrs. V. was on duty, but is excluded from the summons for other reasons.

The single incident on ward 41 of the RKZ, taken into consideration in the analysis of the first report, is included in the charges. No supplementary analysis is therefore required.

Conclusion

The chance of

- a nurse becoming involved in all *eight* incidents on the MCU-1 during the period of time under consideration and given the number of shifts she worked at the JKZ;
- and *the same* nurse becoming involved in at least 5 of the 14 deaths on ward 42 of the RKZ, given the number of shifts she worked;
- and *the same* nurse becoming involved in one of the five deaths on ward 41 at the RKZ, during her only shift worked on that ward,

under the conditions described, equals the product of the separate chances as calculated in the three cases, being

$$0.0000029854 * 0.071559 * 0.013661 = 0.00000000292 \quad (x)$$

Which is less than 1 in 342 million.

The conclusion drawn in the first report, that we must assume a relationship between Mrs. V's work and the occurrence of incidents, holds true even when omitting those incidents from the analysis with which the accused has not been charged.

Leaving out of consideration the four other incidents with which the accused has been charged

Above, I argued the good sense in omitting from the analysis at hand the four other incidents with which the accused has been charged but which were not taken into account in my previous analysis – insufficient data are available on which to base a probability calculation.

Self-evidently, the chance of someone being involved in the three incident sequences, as stated in the above conclusion, and *additionally* becomes involved in another string of incidents is *smaller still* than the chance calculated under (x).

I therefore state without hesitation that a full analysis – one based on the data related to the four cases here not taken into account – can only result in the same conclusion.

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