



**University of Dundee**

**Factors associated with the disinfection of devices attached to peripheral intravenous catheters performed by the nursing team in pediatric units**

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Table 1- Characterization of the professionals from the Nursing team.

Variables	n	%
<b>Units</b>		
Orthopedics	13	22.4
Unit D	28	48.3
Unit E	17	29.3
<b>Work shift</b>		
Day	31	53.4
Night	27	46.6
<b>Category</b>		
Nurse	1	1.7
Nursing Technician	57	98.3
<b>Gender</b>		
Female	47	81
Male	11	19
<b>Age</b>		
20-30 years old	8	13.8
31-40 years old	19	32.8
41-50 years old	19	32.8
51-60 years old	11	18.9
60+ years old	1	1.7
<b>Time in the sector</b>		
Less than a year	23	39.7
1-5 years	16	27.6
6-10 years	7	12.1
11-20 years	6	10.3
21-30 years	6	10.3
<b>Training time</b>		
1-4 years	12	20.7
5-9 years	9	15.5
10-11 years	15	25.9
21-30 years	18	31
30+ years	4	6.9
<b>Additional training</b>		
None	39	67.2
Specialization	3	5.2
Complete Higher Education	5	8.6
Incomplete Higher Education	11	19

Table 2 - Disinfection of peripheral intravenous catheter devices before drug administration.

Variables	Orthopedics n(%)	Unit D n(%)	Unit E n(%)	Total n(%)
<b>Friction time</b>				
<5 seconds	30(83.3)	72(87.8)	30(85.7)	132(86.3)
5-15 seconds	6(16.7)	10(12.2)	5(14.3)	21(13.7)
<b>Drying time</b>				
<5 seconds	31(86.1)	61(76.4)	18(51.4)	111(72.5)
5-15 seconds	5(13.9)	21(25.6)	17(48.6)	43(27.5)
<b>Hand hygiene</b>				
<b>Before preparing the medication</b>				
Yes	30(33.7)	74(39.6)	48(44)	152(39.5)
No	59(66.3)	113(60.4)	61(56)	233(60.5)
<b>Before administering the medication</b>				

	Yes	5(5.6)	14(7.5)	10(9.2)	29(7.5)
	No	84(94.4)	173(92.5)	99(90.8)	356(92.5)
<b>After administering the medication</b>					
	Yes	20(22.5)	35(18.7)	28(25.7)	83(21.6)
	No	69(77.5)	152(81.3)	81(74.3)	302(78.4)

Table 3 - Association of the professionals' work shift and training time with disinfection of peripheral intravenous catheter devices in pediatric units.

	Disinfection				
	Yes n(%)	No n(%)	p <sup>†</sup>	PR	CI(95%)
<b>Work shift</b>					
Day	87(42)	120(58)	0.376	0.81	0.54-1.23
Night	66(37.1)	112(62.9)			
<b>Training time</b>					
≥10 years	78(32)	166(68)	<0.001	0.60	0.47-0.76
1-9 years	75(53.2)	66(46.8)			

<sup>†</sup>=Chi-Square Test, PR=Prevalence Ratio, CI=Confidence Interval

Table 4 – Association of work shift and training time with performance of the disinfection technique of peripheral intravenous catheter devices in pediatric units.

	Friction time					Drying time				
	<5 seconds n(%)	5-15 seconds n(%)	p <sup>†</sup>	PR	CI(95%)	<5 seconds n(%)	5-15 seconds n(%)	p <sup>†</sup>	PR	CI(95%)
<b>Work shift</b>										
Day	72(82.8)	15(17.2)	0.225	0.91	0.80-1.02	67(77)	20(23)	0.151	1.18	0.96-1.45
Night	60(90.9)	6(9.1)				43(65.2)	22(34.8)			
<b>Training time</b>										
≥10 years	71(91)	7(9)	0.087	1.13	0.99-1.3	57(73.1)	21(26.9)	0.879	1.03	0.84-1.26
1-9 years	60(80)	15(20)				53(70.7)	22(29.3)			

<sup>†</sup>=Chi-Square Test, PR=Prevalence Ratio, CI=Confidence Interval