4.3.4.7 *Disability, differential diagnosis, defibrillation and drugs C7_1 to C7_89; D7_1 to D7_89*

This question will be analysed in five separate parts because the actions are related to each other, and to simplify the figures.

a) *Part 1 C7_11 to C7_13; D7_11 to D7_13*

Part 1 provides the results and analysis of performance of three skills pertaining to disability, differential diagnosis, defibrillation and drugs: AVPU scale, Glasgow coma scale and neonatal stress response.

Figures 4.59 and 4.60 illustrate the skills visually by indicating the mean score for each variable.

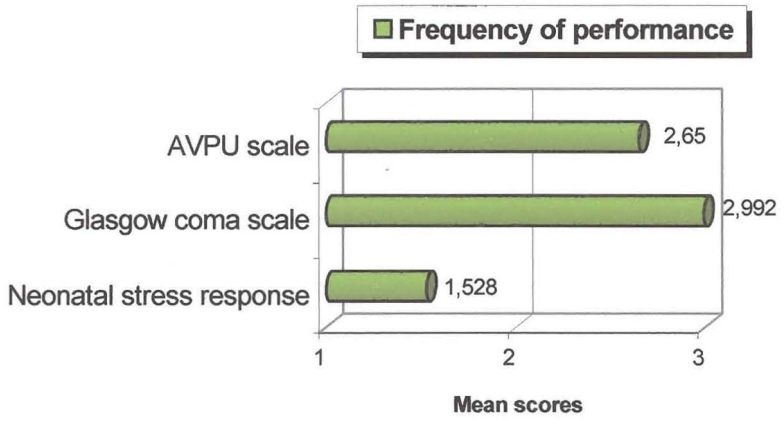

Figure 4.59 - Disability, diagnosis, defribillation and drugs (Part 1)

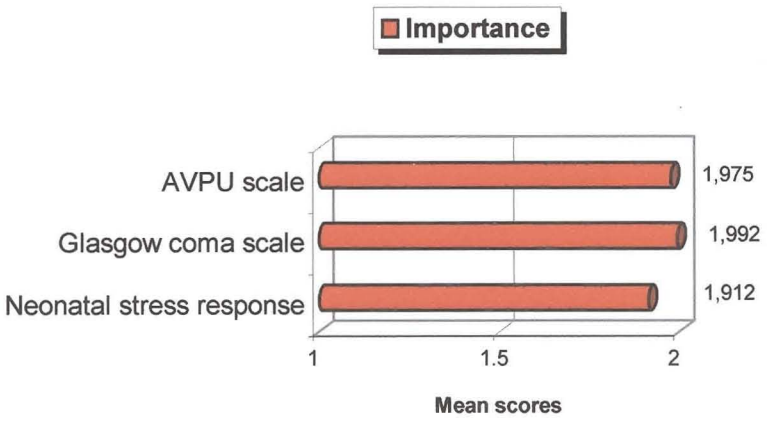

Figure 4.60 - Disability, diagnosis, defribillation and drugs (Part 1)

Table 4.21 reflects the *frequency of performance* of advanced life-support skills pertaining to disability, differential diagnosis, defibrillation and drugs. Note that the majority of the respondents indicated that they frequently perform the skills AVPU scale and Glasgow coma scale.

Table 4.22 reflects the *importance* of these skills to be included in the curriculum and the majority of the respondents indicated that they agree that these skills are important and should be included in the curriculum.

b) Part 2 C7_2 to C7_4; D7_2 to D7_4

Part 2 provides the results and analysis of performance of three skills pertaining to disability, differential diagnosis, defibrillation and drugs: blood glucose monitoring, differential diagnosis for cardiac arrest and defibrillation.

Figures 4.61 and 4.62 illustrate the skills visually by indicating the mean score for each variable.

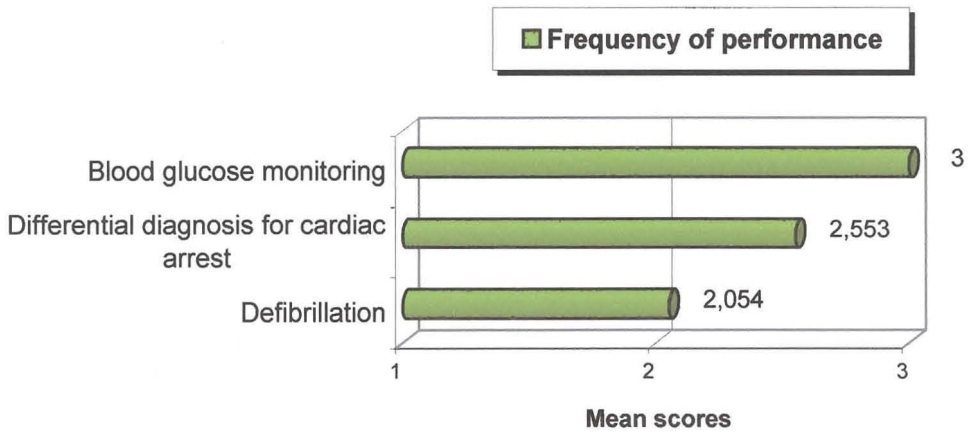

Figure 4.61 -Disability, differential diagnosis, defibrillation and drugs (Part 2)

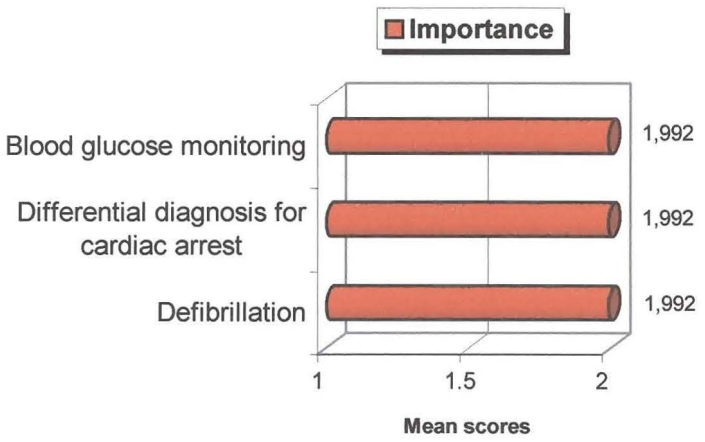

Figure 4.62 - Disability, differential diagnosis, defribrillation and drugs (Part 2)

Table 4.21 reflects the *frequency of performance* of advanced life-support skills pertaining to disability, differential diagnosis, defibrillation and drugs. Note that the majority of the respondents indicated that they frequently perform monitoring of glucose and differential diagnosis for cardiac arrest.

However, the performance frequency for defibrillation was distributed throughout the continuum.

Table 4.22 reflects the *importance* of these skills to be included in the curriculum and the majority of the respondents indicated that they agree that these skills are important and should be included in the curriculum.

c) *Part 3* C7_5 to C7_7; D7_5 to D7_7

Part 3 provides the results and analysis of performance of the first three skills pertaining to disability, differential diagnosis, defibrillation and drugs: cardioversion, external pacing and vagal manoeuvres.

Figures 4.63 and 4.64 illustrate the skills visually by indicating the mean score for each variable.

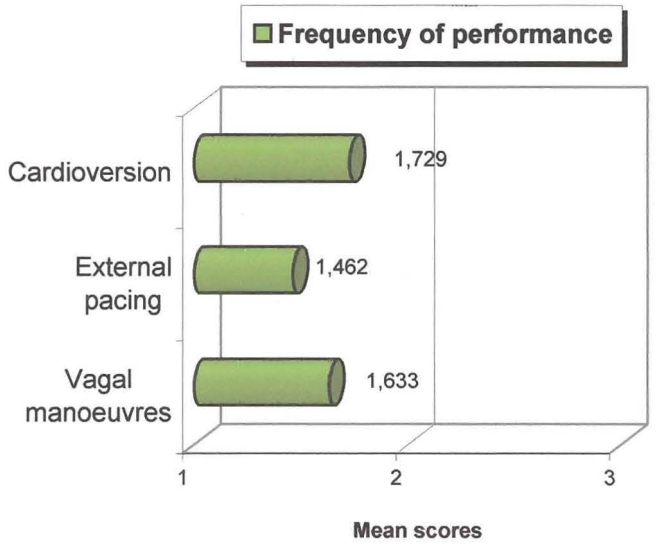

Figure 4.63 - Disability, differential diagnosis, defibrillation and drugs (Part 3)

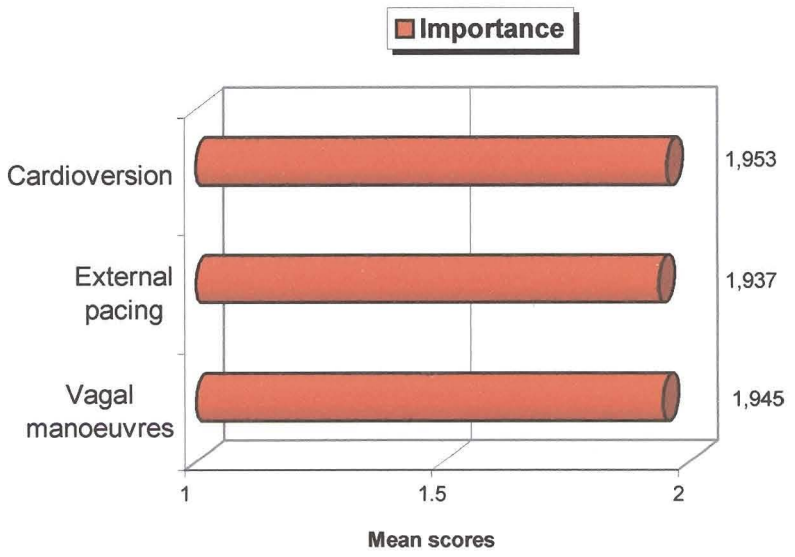

Figure 4.64 - Disability, differential diagnosis, defibrillation and drugs (Part 3)

Table 4.21 reflects the *frequency of performance* of advanced life-support skills pertaining to disability, differential diagnosis, defibrillation and drugs. Note that the majority of the respondents indicated that they perform the skills seldom or never. However, cardioversion was spread throughout the continuum.

Table 4.22 reflects the *importance* of these skills to be included in the curriculum and the majority of the respondents indicated that they agree that these skills are important and should be included in the curriculum.

d) Part 4 C7_81 to C7_84; D7_81 to D7_84

Part 4 provides the results and analysis of performance of four skills pertaining to disability, differential diagnosis, defibrillation and drugs: sedation, analgesia, skeletal muscle relaxation and treatment of cardiac arrest.

Figures 4.65 and 4.66 visually illustrates the skills pertaining to assessment and recording and show that all four skills are performed frequently and are seen as important to include in the curriculum.

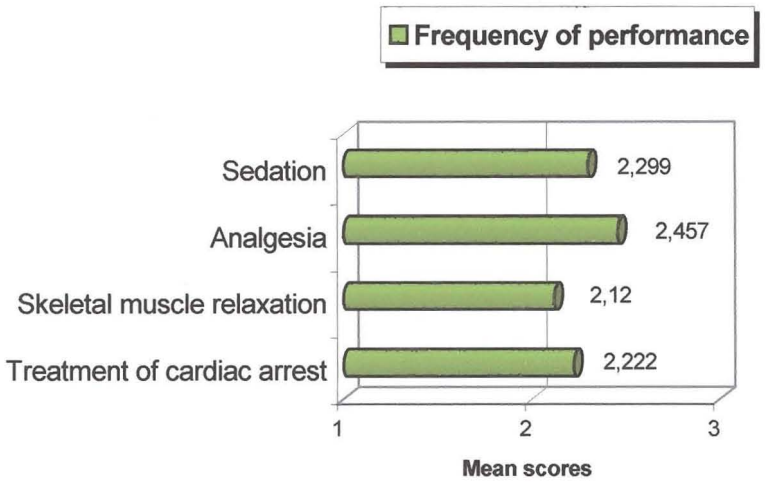

Figure 4.65 - Disability, differential diagnosis, defribrillation and drugs (Part 4)

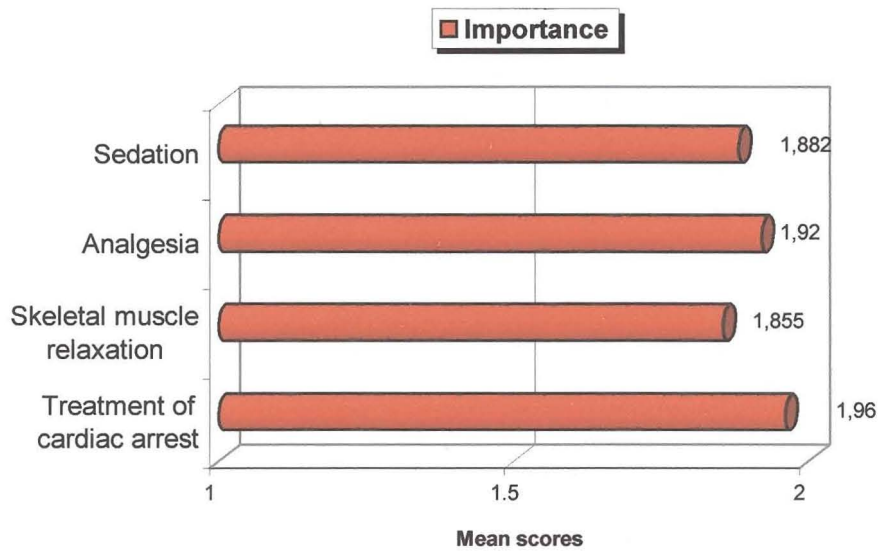

Figure 4.66 - Disability, differential diagnosis, defribrillation and drugs (Part 4)

Table 4.21 reflects the *frequency of performance* of advanced life-support skills pertaining to disability, differential diagnosis, defibrillation and drugs. Note that the majority of the respondents indicated that they frequently perform sedation and analgesia. Although the respondents indicated that they

frequently perform skeletal muscle relaxant (48,8%) and treatment of cardiac arrest (49,2%), these skills were performed throughout the continuum.

Table 4.22 reflects the *importance* of these skills to be included in the curriculum and the majority of the respondents indicated that they agree that these skills are important and should be included in the curriculum.

e) Part 5 C7_85 to C7_89; D7_85 to D7_89

Part 5 provides the results and analysis of performance of the first five skills pertaining to disability, differential diagnosis, defibrillation and drugs: correction of hypoxia, positive inotropes, correction of metabolic acidosis, thrombolysis in acute myocardial infarction and treatment of acute pulmonary oedema.

Figures 4.67 and 4.68 illustrate the skills visually by indicating the mean score of each variable.

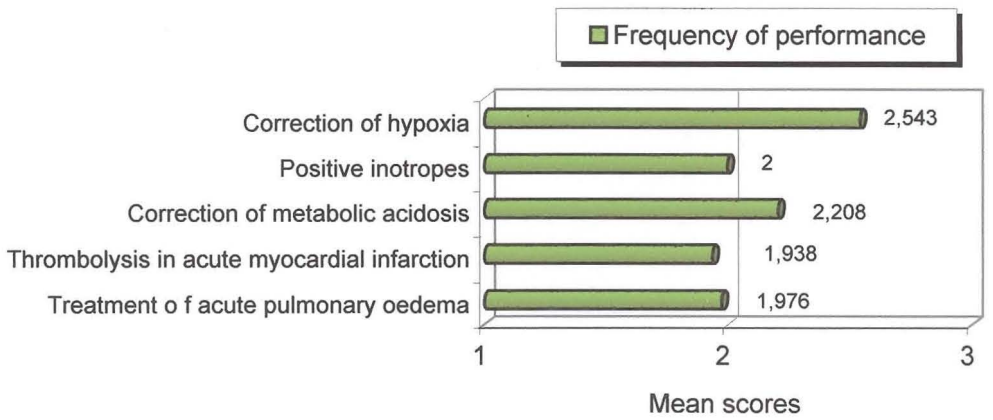

Figure 4.67 - Disability, differential diagnosis, defibrillation and drugs (Part 5)

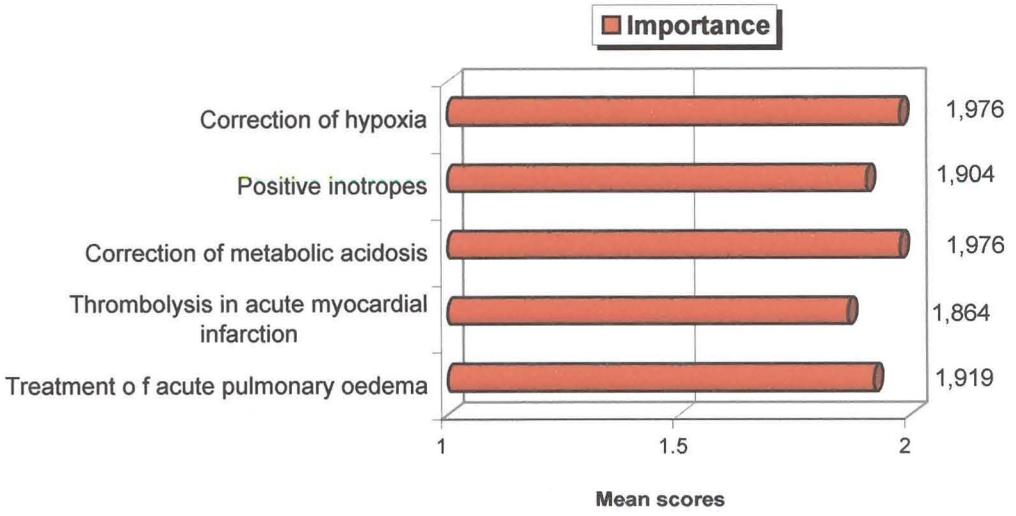

Figure 4.68 - Disability, differential diagnosis, defribrillation and drugs (Part 5)

Table 4.21 reflects the *frequency of performance* of advanced life-support skills pertaining to disability, differential diagnosis, defibrillation and drugs. Note that the majority of the respondents indicated that they frequently perform the skills correction of hypoxia and correction of metabolic acidosis. The skills positive inotropes, thrombolysis in acute myocardial infarction and treatment of acute pulmonary oedema varied throughout the continuum.

Table 4.22 reflects the *importance* of these skills to be included in the curriculum and the majority of respondents indicated that they agree that these skills are important and should be included in the curriculum.

The degree of relationship between the frequency of performance and importance of the skills to be included in the curriculum as indicated by the Spearman correlation (see Annexure D – Spearman correlation between the variables in Section C and Section D) illustrated the following:

- The AVPU scale indicated a highly significant Spearman correlation coefficient (r_s 0,623)
- The Glasgow coma scale indicated a significant Spearman correlation coefficient (r_s 0,178)

- Neonatal stress response indicated a significant Spearman correlation coefficient (r_s 0.216)
- External pacing indicated a highly significant Spearman correlation coefficient (r_s 0,284)
- Vagal manoeuvres indicated a significant Spearman correlation coefficient (r_s 0,209)
- Sedation indicated a highly significant Spearman correlation coefficient (r_s 0,455)
- Analgesia indicated a highly significant Spearman correlation coefficient (r_s 0,411)
- Skeletal muscle relaxant indicated a highly significant Spearman correlation coefficient (r_s 0,483)
- Treatment of cardiac arrest indicated a significant Spearman correlation coefficient (r_s 0,192)
- Correction of hypoxia indicated a highly significant Spearman correlation coefficient (r_s 0,242)
- Positive inotropes indicated a highly significant Spearman correlation coefficient (r_s 0,330)
- Correction of metabolic acidosis indicated a significant Spearman correlation coefficient (r_s 0,230)
- Thrombolysis in acute myocardial infarction indicated a highly significant Spearman correlation coefficient (r_s 0,523)
- Treatment of acute pulmonary oedema indicated a highly significant Spearman correlation coefficient (r_s 0,361)

Table 4.21– Frequency of performance of advanced life-support skills (%) C7_1 to C7_89

SKILLS	State hospitals						Private hospitals						Total						X^2	df†
	Seldom / Never		Periodically		Frequently		Seldom / Never		Periodically		Frequently		Seldom / Never		Periodically		Frequently			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Disability, differential diagnosis, defibrillation and drugs																				
Part 1																				
Monitoring patient's level of consciousness																				
AVPU scale	3	10,3	0	0,0	26	89,7	14	16,1	5	5,8	68	78,2	17	14,7	5	4,3	94	81,0	2,512	2
Glasgow coma scale	0	0,0	0	0,0	33	100,0	0	0,0	1	1,1	93	98,9	0	0,0	1	0,8	126	99,2	0,354	1
Neonatal stress response	15	48,4	5	16,1	11	35,5	64	69,6	16	17,4	12	13,0	79	64,2	21	17,1	23	18,7	7,885*	2
Part 2																				
Blood glucose monitoring	0	0,0	0	0,0	33	100,0	0	0,0	0	0,0	94	100,0	0	0,0	126	99,2	1	0,8	0,354	1
Differential diagnosis for cardiac arrest (correctable causes)	2	6,7	8	26,7	20	66,7	7	7,9	27	30,3	55	61,8	9	7,6	35	29,4	75	63,0	0,230	2
Defibrillation	11	33,3	10	30,3	12	36,4	24	25,8	41	44,1	28	30,1	35	27,8	51	40,5	40	31,8	1,940	2

† Degrees of freedom
* $p < 0,05$
** $p < 0,01$

Table 4.21 – (continued)

SKILLS	State hospitals						Private hospitals						Total						X^2	df†
	Seldom / Never		Periodically		Frequently		Seldom / Never		Periodically		Frequently		Seldom / Never		Periodically		Frequently			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Part 3																				
Cardioversion	15	45,5	10	30,3	8	24,2	48	52,2	24	26,1	20	21,7	63	50,4	34	27,2	28	22,4	0,444	2
External pacing	22	66,7	5	15,2	6	18,2	63	67,7	18	19,4	12	12,9	85	67,5	23	18,3	18	14,3	0,715	2
Vagal manoeuvres	20	60,6	5	15,2	8	24,2	47	51,7	29	31,9	15	16,5	67	54,0	34	27,4	23	18,6	3,614	2
Part 4																				
Prescribe appropriate medication to facilitate																				
Sedation	10	32,3	4	12,9	17	54,8	25	27,2	9	9,8	58	63,0	35	28,5	13	10,6	75	61,0	0,680	2
Analgesia	8	25,8	2	6,5	21	67,7	20	21,7	6	6,5	66	71,7	28	22,8	8	6,5	87	70,7	0,221	2
Skeletal muscle relaxation	12	40,0	6	20,0	12	40,0	31	34,1	12	13,2	48	52,8	43	35,5	18	14,9	60	49,6	1,667	2
Treatment of cardiac arrest	11	35,5	4	12,9	16	51,6	22	24,2	26	28,6	43	47,3	33	27,1	30	24,6	59	48,4	3,493	2

† Degrees of freedom
* $p < 0,05$
** $p < 0,01$

Table 4.21 – (continued)

SKILLS	State hospitals						Private hospitals						Total						X^2	df†
	Seldom / Never		Periodically		Frequently		Seldom / Never		Periodically		Frequently		Seldom / Never		Periodically		Frequently			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Part 5																				
Correction of hypoxia	4	12,5	5	15,6	23	71,9	13	14,3	17	18,7	61	67,0	17	13,8	22	17,9	84	68,3	0,260	2
Positive inotropes	16	50,0	2	6,3	14	43,8	36	40,0	14	15,6	40	44,4	52	42,6	16	13,1	54	44,3	2,115	2
Correction of metabolic acidosis	5	16,7	6	20,0	19	63,3	30	33,0	19	20,9	42	46,2	35	28,9	25	20,7	61	50,4	3,402	2
Thrombolysis in acute myocardial infarction	17	53,1	4	12,5	11	34,4	36	38,7	21	22,6	36	38,7	53	42,4	25	20,0	47	37,6	2,496	2
Treatment of acute pulmonary oedema	13	41,9	7	22,6	11	35,5	33	35,9	26	28,3	33	35,9	46	37,4	33	26,8	44	35,8	0,508	2

† Degrees of freedom
* $p < 0,05$
** $p < 0,01$

Table 4.22 – Importance of advanced life-support skills (%) D7_1 to D7_89

Skills	State hospitals				Private hospitals				Total				X^2	df†
	Disagree		Agree		Disagree		Agree		Disagree		Agree			
	N	%	N	%	N	%	N	%	N	%	N	%		
Disability, differential diagnosis, defibrillation and drugs														
Part 1														
Monitoring patient's level of consciousness														
AVPU scale	2	6,9	27	93,1	1	1,1	88	98,9	3	2,5	115	97,5	2,942	1
Glasgow coma scale	1	3,3	29	96,7	0	0,0	93	100,0	1	0,8	122	99,2	3,125	1
Neonatal stress response	3	10,7	25	89,3	8	8,6	85	91,4	11	9,1	110	90,9	0,116	1
Part 2														
Blood glucose monitoring	1	3,3	29	96,7	0	0,0	93	100,0	1	0,8	122	99,2	3,125	1
Differential diagnosis for cardiac arrest (correctable causes)	1	3,5	28	96,6	0	0,0	92	100,0	1	0,8	120	99,2	3,199	1
Defibrillation	1	3,3	29	96,7	0		93	100,0	1	0,8	122	99,2	3,125	1
Part 3														
Cardioversion	4	13,3	26	86,7	1	1,1	92	98,9	5	4,1	118	95,9	8,740	1
External pacing	5	16,7	25	83,3	3	3,2	90	96,8	8	6,5	115	93,5	6,739	1
Vagal manoeuvres	3	10,0	27	90,0	3	3,2	90	96,8	6	4,9	117	95,1	2,243	1

† Degrees of freedom
* $p < 0,05$
** $p < 0,01$

Table 4.22 – (continued)

Skills	State hospitals				Private hospitals				Total				χ^2	df†
	Disagree		Agree		Disagree		Agree		Disagree		Agree			
	N	%	N	%	N	%	N	%	N	%	N	%		
Part 4														
Prescribe appropriate medication to facilitate														
Sedation	7	23,3	23	76,7	8	8,6	85	91,4	15	12,2	108	87,8	4,597	1
Analgesia	3	10,0	27	90,0	7	7,7	84	92,3	10	8,3	111	91,7	0,159	1
Skeletal muscle relaxation	6	20,0	24	80,0	12	13,3	78	86,7	18	15,0	102	85,0	0,784	1
Treatment of cardiac arrest	2	6,7	28	93,3	3	3,3	88	96,7	5	4,1	116	95,9	0,647	1
Part 5														
Correction of hypoxia	2	6,7	28	93,3	1	1,1	90	98,9	3	2,5	118	97,5	2,893	1
Positive inotropes	3	10,0	27	90,0	9	9,9	82	90,1	12	9,9	109	90,1	0,000	1
Correction of metabolic acidosis	2	6,9	27	93,1	1	1,1	89	98,9	3	2,5	116	97,5	2,987	1
Thrombolysis in acute myocardial infarction	6	20,0	24	80,0	10	11,0	81	89,0	16	13,2	105	86,8	1,597	1
Treatment of acute pulmonary oedema	4	13,3	26	86,7	6	6,7	83	93,3	10	8,4	109	91,6	1,267	1

† Degrees of freedom
* $p < 0,05$
** $p < 0,01$