LEVEL III (1)

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NURSING CARE HOUR STANDARDS
HCSD Report #81-009
Part V thru Part VIII

Book 4 of 4 Books

HCSD Report #81-009 (Part V)

Nursing Care Hour Standards Study: Part V
Psychiatric Patient Classification Subsystem

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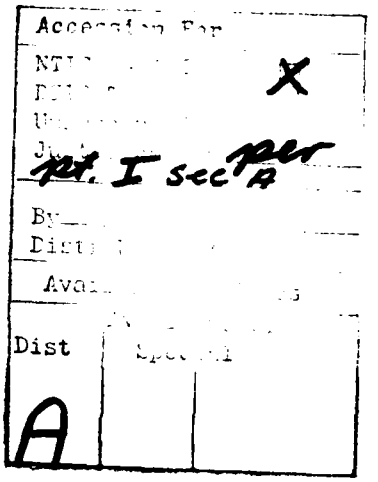

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A. INTRODUCTION

Part V Psychiatric Patient Classification Subsystem addresses the development and testing of a multidimensional factor-evaluation designed patient classification subsystem for psychiatric clinical services. If nursing managers are to make sound administrative decisions on psychiatric staffing needs, they must measure the appropriate nursing care activities and use the best measuring tool available. The best tool would be an acceptable reference standard, namely, the number of hours of nursing care required to meet safe essential patient care needs with the proper mix by skill level of care providers. The present study has attempted to develop and provide such a tool for the psychiatric clinical services. The approach undertaken also considered the fact that time accountability is the principle commodity in accounting for human resource utilization.

B. OBJECTIVES

The two objectives for Part V Psychiatric Patient Classification Subsystem were:

1. To develop a factor-evaluation designed patient classification subsystem for the psychiatric clinical services which would provide a better staffing mix based on quantified direct nursing care requirements.

2. To determine if the Psychiatric Patient Classification Subsystem demonstrates validity and reliability.

C. PSYCHIATRIC PATIENT CLASSIFICATION SUBSYSTEM

The format and factor-evaluation design of the Psychiatric Patient Classification Subsystem was devised to enable professional nurses in its use to ascertain direct nursing care requirements for inpatients. The Psychiatric Patient Classification Subsystem was designed with five components: (1) patient classification instrument mathematical model; (2) patient classification instrument; (3) patient classification instrument instructional information; (4) patient classification tabulation form; and (5) methodology for determining care provider mix. The methodology for the development of each component will be discussed.

1. Psychiatric Patient Classification Instrument Mathematical Model.

The psychiatric patient classification instrument mathematical model (Appendix A) was designed for an automated or manual system. The design of the model delineates the direct nursing care activities, frequency rate for a 24-hour time frame, minimal essential mean tasking time, and the appropriate weighted score. The organization of the mathematical model displays all dimensions of direct patient care and all direct nursing care activities within each dimension labeled as patient care indicator. Since the primary purpose of the Psychiatric

Patient Classification Subsystem was to determine the need for direct nursing care resources, then the patient care indicators must represent those direct nursing care activities that have the greatest impact on nursing time. The psychiatric patient classification instrument mathematical model was developed by utilizing those patient care indicators which were ascertained through timing and observational studies. The psychiatric patient classification instrument mathematical model was designed with the following patient care indicators:

a. Psychiatric

b. Psychological

c. Neurological

d. Medication

e. Nutrition

f. Vital Signs/Assessment

g. Patient Teaching

h. Diagnostic Tests

i. Hygiene

j. Elimination

k. Mobility/Exercise

The number and scope of the patient care indicators were selected to better quantify those direct nursing care activities that are unique to the psychiatric patient, therefore, are considered to be more crucial for correctly identifying the appropriate category of care for the psychiatric patient.

The weighted score for each direct nursing care activity was determined by selecting the best common denominator to fit the total number of direct nursing care activities included within the mathematical model. The weighted factor scale which follows was utilized in developing the psychiatric patient classification instrument mathematical model: five minutes equals one point and 2.5 minutes equals 0.5 points. This point conversion scale allows for simple arithmetic summing to quantify the hours of direct nursing care required for psychiatric inpatients, and even if all of the direct nursing care activities were required for the psychiatric patient the error rate would not exceed plus or minus twenty-four minutes.

2. Psychiatric Patient Classification Instrument.

The psychiatric patient classification instrument (Appendix B) was designed for factor evaluation. Extensive comparative analyses were conducted for the determination of the patient care indicators which were considered to represent those direct nursing care activities that have the greatest impact on nursing care time. Based upon these findings twelve patient care indicators were

incorporated within the factor-evaluation designed instrument. Therefore, this type of design allows for the identification of direct nursing care activities for each patient care indicator.

The psychiatric patient classification instrument was designed to provide a simple tool in which the professional nurse needs only to rate those direct nursing care activities which are appropriate for the patient being rated. The direct nursing care activities scored on the instrument must have been performed by nursing personnel or assistance provided to other staff members performing the activity. If the patient performs self-care activities, then only those direct nursing care activities performed by nursing personnel are scored. The system was designed so that each patient needs only one rating for each 24-hour rating period. The ratings are completed at the end of the 24-hour rating period and are reflective of the preceding 24-hour time frame. The normal rating period was 0700 to 0700 hours; however, patients who were hospitalized less than 24 hours were also rated. In those patients who were within the system less than 24 hours, the ratings were reflective of the time period that the patient was present within the hospital system.

The instrument was designed to allow for the actual rating of each patient to be accomplished by selecting the frequency rate for each direct nursing care activity that was required during the rating period. Therefore, rating of the patient on the psychiatric patient classification instrument was accomplished by selecting the frequency rate for the required direct nursing care activity from the options provided on the instrument. Moreover, the instrument was designed so that the frequency rate for each direct nursing care activity has a corresponding point value labeled as weighted score. The format for the psychiatric patient classification instrument follows the same format as the psychiatric patient classification instrument mathematical model. As was presented earlier, the patient care indicators were identified as those groupings of direct nursing care activities which most influence the total patient care requirements. Based upon the design of the psychiatric patient classification instrument it is the total points within each patient care indicator that determines the patient care indicator score (PCIS). The sum of the patient care indicator scores determines the total points, hours of care and category of care for the rated patient.

The psychiatric patient classification instrument was developed with the following classification scheme as displayed in Table 1.

Table 1

Psychiatric Patient Classification Scheme

Total Points	Hours of Care	Category of Care
1 - 23	< 1 thru 1	1
24 - 47	2 thru 3	2
48 - 95	4 thru 7	3
96 - 143	8 thru 11	4
144 - 288	12 thru 24	5

A unique feature considered in the development of the instrument includes the option of including infrequently occurring direct nursing care activities which impact significantly on nursing workload, and can be included in the rating under "other therapeutic activities/modalities."

The psychiatric patient classification instrument was designed to allow for collection of demographic information. The keypunch spaces one through twelve were provided for data collection which best meets the requirements of the medical treatment facility.

3. Psychiatric Patient Classification Instrument Instructional Information.

The psychiatric patient classification instrument instructional information component (Appendix C) was developed to provide adequate information for the user to consistently apply the same methodology for rating patients' direct care requirements. The organization of the operational definitions and weighted score for each direct nursing care activity follows the same format as the psychiatric patient classification instrument mathematical model and the psychiatric patient classification instrument. To reduce the redundancy of the operational definitions provided, each direct nursing care activity also includes: (a) identify and screen the patient; (b) explain the procedure to the patient; (c) raise, lower, or adjust the bed before and after the nursing activity; and (d) clean and straighten area.

In utilizing the patient classification instrument instructional information component the score for each direct nursing care activity applies only to the Psychiatric Patient Classification Subsystem for which it was designed. The psychiatric patient classification instrument instructional information component contains the listing of those infrequently occurring direct nursing care activities which impact significantly on nursing workload, and each of these direct nursing care activities is included in the rating under "other therapeutic activities/ modalities." This list of direct nursing care activities is not all-inclusive, as the frequency with which some direct nursing care activities occurred was not sufficient to permit an accurate analysis or generation of a valid score. Moreover, in rating the patients' direct nursing care requirements, only those activities provided are to be utilized for rating the direct care requirements.

4. Psychiatric Patient Classification Tabulation Form.

The psychiatric patient classification tabulation form (Appendix D) was designed for the recording of summary data. After the assessment of direct nursing care requirements has been completed by the professional nurse, the unit clerk can use the psychiatric patient classification tabulation form to record the patient care indicator scores for each patient. The instructions for recording of patient data are located within the psychiatric patient classification instrument instructional information component. The data accumulated to this point will provide the necessary information for determining category of care and the hours of care within each patient care indicator for the clinical unit.

The results from extensive data analyses were utilized to design the psychiatric patient classification tabulation form. These analyses demonstrated that distribution of hours of care within each patient care indicator and not the category of care determines the mix by skill level of care providers required to

meet the rated direct nursing care requirements for psychiatric inpatients. It must be emphasized that both category of care and hours of care within each patient care indicator can determine man-hour requirements, but only the hours of care within each patient care indicator can determine the best mix by skill level of care providers.

Since all medical treatment facilities do not have automated systems readily available, the psychiatric patient classification tabulation form was designed to allow for manual computations as well as keypunching of the patient care indicator scores. Lastly, the psychiatric patient classification tabulation form was designed with the same format as the psychiatric patient classification instrument mathematical model, psychiatric patient classification instrument, and psychiatric patient classification instrument instructional information components.

5. Methodology for Determining Care Provider Mix for Psychiatry.

The methodology for determining care provider mix for psychiatry (Appendix E) was developed for the purpose of providing the best mix by skill level of care providers. The diversity of direct nursing care activities requires a more complex mix of personnel; therefore, more sophisticated techniques are required to meet these demands. During the timing and observational studies the observers recorded the number and skill level of care providers for each direct nursing care activity. These data were utilized to establish personnel mix percentage scores for each direct nursing care activity. These personnel mix percentage scores were utilized in the development of the personnel percentage table for care provider mix for psychiatric patients. The percentage table for provider mix for psychiatry was developed by collapsing the personnel percentage scores for each direct nursing care activity within each patient care indicator. Table 2 displays the percentage table for care provider mix for psychiatry.

The mix by skill level of care providers can easily be determined by utilizing the summary data from the psychiatric patient classification tabulation from and the percentage table for care provider mix for psychiatry. This approach differs significantly from previous patient classification systems which match category of care with mix of personnel. Present findings demonstrate that the hours of care within each patient care indicator was the determinant for the mix by skill level of care providers and not the category of care. It must be noted that patient classification systems that match category of care with mix of personnel make the major assumption that all patients in the same category of care have the same direct nursing care requirements; hence, the same mix of personnel can meet those care requirements. However, the present findings do not support this assumption.

It is important to note that the percentage table for care provider mix for psychiatry was developed specifically for the psychiatric clinical service and is not generalizable to other inpatient clinical services. Moreover, the percentage table for care provider mix for psychiatry applies only to the adult patient.

Table 2

Percentage Table for Care Provider Mix for Psychiatry

	Professional	Technical	Paraprofessional
Psychiatric	19	60	21
Psychological	53	33	14
Neurological	73	24	3
Medication	90	8	2
Nutrition	20	57	23
Vital Signs/Assessment	25	48	27
Patient Teaching	83	10	7
Diagnostic Test	47	40	13
Hygiene	12	64	24
Elimination	31	51	18
Mobility/Exercise	31	49	20
Other Therapeutic Activities/Modalities	47	38	15

D. DATA COLLECTION AND DATA ANALYSIS

1. Validity Determination.

Validity studies were conducted to determine if the Psychiatric Patient Classification Subsystem demonstrated content-related and criterion-related validity. Professional nursing judgment was involved in the original design of the psychiatric patient classification instrument and was again required for validation of the content of the instrument. It is of importance to note that during all data collection efforts, the participants had the option of and were encouraged to indicate inadequacies in the Psychiatric Patient Classification Subsystem and suggest modifications.

Having completed the content-related validity testing, correlation coefficients were computed to determine the relationship of documented direct nursing care requirements with the psychiatric patient classification instrument.

Correlation coefficients for documented direct nursing care requirements with the psychiatric patient classification instrument mathematical model for two independent testings are displayed in Table 3.

Table 3

Validity: Correlation Coefficients for Documented Direct Nursing Care Requirements with the Psychiatric Patient Classification Instrument Mathematical Model

Psychiatric	*Correlation Coefficients*	
	Test 1	Test 2
Direct Nursing Care Requirements Mathematical Model	.99	.99

Observational studies were conducted to determine the relationship of the psychiatric patient classification instrument to the actual observed and timed measurements of direct nursing care activities. The criterion-related validity coefficients for psychiatry are displayed in Table 4.

Timed measurements refer to the actual measurements by stopwatch; observed frequencies refer to actual observed frequency rates for each direct nursing care activity; and hours of care were established utilizing the appropriate minimal essential mean tasking time. Assessed requirements refer to the total hours of care established through consensus nursing judgment. As shown in Table 4 the criterion-related validity coefficients for psychiatry were r = .99.

Table 4

Criterion-Related Validity Coefficients for Timed Measurements, Observed Frequencies and Assessed Requirements

	24-Hour Study Period			
Hours of Direct Nursing Care	Mean	SD	95% CI	Pearson's r
Timed Measurements	13.72	11.00	7.63-19.81	.99
Observed Frequencies	13.94	10.79	7.97-19.92	
Timed Measurements	13.72	11.00	7.63-19.80	.99
Assessed Requirements	13.97	10.77	8.01-19.94	
Observed Frequencies	13.94	10.79	7.97-19.92	.99
Assessed Requirements	13.97	10.77	8.01-19.94	

2. Reliability Determination.

Reliability studies were conducted to determine: (a) if the psychiatric patient classification instrument demonstrated statistically significant interrater reliability for inpatient classification; and (b) if the individual patient care indicators displayed internal consistency.

Prior to initiation of the interrater reliability studies, the professional nurse raters received an orientation to and standardized instructions about the instruments used in the study. A two-hour orientation period was held for group presentation, followed by individual orientation by the project officer. The raters were given a minimum of ten days in which to practice rating patients using the Psychiatric Patient Classification Subsystem.

A schedule of data collection for the psychiatric clinical units was devised to allow for rating of patients on one preselected day per week. The study was conducted over an eight-week period with eight data collection days. The time-span schedule, commencing in September 1980 and ending in January 1981, required four months to complete. The data collection periods were staggered to allow for the project officer to initiate the study within four medical treatment facilities as follows: William Beaumont Army Medical Center; Eisenhower Army Medical Center; Darnall US Army Community Hospital, Fort Hood; and Womack US Army Community Hospital, Fort Bragg.

Eight data collection periods were conducted within the four medical treatment facilities. Ratings were completed on the entire inpatient population of all adult psychiatric clinical units. Each of the 1030 inpatients were rated by independent, trained pairs of professional nurse raters. In order to establish a level of quality control for the data collection efforts at the unit level, the forms were collected by a facility project officer. The facility project officer was responsible for checking the instruments for completeness, legibility, reconstruction of any missing data and pairing the match pairs of data from the two professional nurse raters. At the end of each week, the facility project officer mailed the completed instruments to HCSD using the preaddressed envelopes provided by HCSD. The HCSD staff edited each instrument and recomputed all scores to assure accuracy prior to coding of data for keypunching.

The population consisted of 774 males and 256 females with a mean age of 25 years. A description of the patient population is presented in order to provide a framework for the analyses of the study results. The category of care by age group for rater one vs rater two is shown in Table 5.

Table 5

Category of Care by Age Group for Rater One vs Rater Two
N = 1030

Category of Care		Age Group 5	Age Group 6	Age Group 7
1	Rater One	186	100	1
	Rater Two	203	97	1
2	Rater One	398	148	2
	Rater Two	377	156	1
3	Rater One	88	60	1
	Rater Two	90	56	2
4	Rater One	12	6	0
	Rater Two	11	3	0
5	Rater One	20	8	0
	Rater Two	23	10	0

Age Group

5 = 16 thru 25 years
6 = 26 thru 55 years
7 = 56 thru 65 years

The breakdown of category of care by sex of the patients for rater one vs rater two are shown in Table 6.

Table 6

Category of Care by Sex of the Patient for Rater One vs Rater Two

Category of Care		Sex of Patient: Male	Sex of Patient: Female
1	Rater One	211	76
	Rater Two	225	76
2	Rater One	422	126
	Rater Two	411	123
3	Rater One	116	33
	Rater Two	110	38
4	Rater One	12	6
	Rater Two	9	5
5	Rater One	13	15
	Rater Two	19	14
	N	774	256

The descriptive data of the patient care indicator scores for rater one vs rater two by sex of the total population are shown in Table 7.

Table 7

Descriptive Data of Patient Care Indicator Scores
for Rater One vs Rater Two by Sex

		Mean	SD	N
Male	Rater One	37.91	32.23	774
	Rater Two	37.66	32.26	
Female	Rater One	45.52	55.49	256
	Rater Two	46.53	57.04	

Category of care distribution by days of the week for rater one vs rater two are shown in Table 8.

Table 8

Category of Care by Days of the Week for Rater One vs Rater Two
N = 1030

Category of Care		Days of Week: Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	Rater One	34	52	31	23	30	58	59
	Rater Two	40	47	30	33	27	64	60
2	Rater One	99	86	73	81	72	54	83
	Rater Two	95	93	65	70	79	49	83
3	Rater One	41	30	12	27	19	12	8
	Rater Two	39	28	20	25	17	12	7
4	Rater One	0	2	3	0	7	5	1
	Rater Two	0	2	2	2	4	3	1
5	Rater One	7	2	4	6	2	4	3
	Rater Two	7	2	6	7	3	5	3

In the determination of interrater reliability two sets of ratings, one for total score and one for category of care, were obtained from the assessment of each of the 1030 inpatients by two independent trained raters representing four medical treatment facilities. These data were analyzed using the Pearson's correlation coefficient with a resultant reliability coefficient for total score and category of care. Table 9 displays the psychiatric patient classification instrument frequency distribution: rater one vs rater two for category of care. Pearson's correlation coefficient for category of care rater one vs rater two, r = .83.

Table 9

Psychiatric Patient Classification Instrument
Frequency Distribution: Rater One vs Rater Two for Category of Care

N = 1030

Category of Care for Rater One	Category of Care for Rater Two 1	2	3	4	5
1	228	55	4	0	0
2	68	442	38	0	0
3	5	35	104	2	3
4	0	1	1	12	4
5	0	1	1	0	26

Pearson's r for category of care rater one vs rater two, r = .83

Concurrently, Table 10 displays the correlation coefficient for total patient care indicator score (PCIS) by category of care. Pearson's correlation coefficient for total PCIS rater one vs rater two across categories, r = .93. In addition, all coefficients for total score and category of care were significant ($p < .001$).

Table 10

Psychiatric Patient Classification Instrument
Total Patient Care Indicator Score (PCIS) by Category of Care

Category of Care		PCIS	Mean	SD	95% CI	N
1	Rater One	1-23	15.79	6.86	14.99-16.59	287
	Rater Two		15.72	6.46	14.98-16.45	301
2	Rater One	24-47	34.22	6.93	33.68-34.80	548
	Rater Two		34.14	6.69	33.58-34.71	534
3	Rater One	48-95	60.03	11.06	58.24-61.82	149
	Rater Two		61.46	11.62	59.57-63.35	148
4	Rater One	96-143	121.03	14.50	113.82-128.24	18
	Rater Two		111.07	14.08	102.94-119.20	14
5	Rater One	144-288	235.25	62.65	210.96-259.54	28
	Rater Two		225.74	60.64	204.24-247.24	33

Pearson's r for total PCIS rater one vs rater two across categories, r = .93.

To establish internal consistency of the psychiatric patient classification instrument, two independent raters' patient care indicator scores were analyzed to determine if the individual responses to the various patient care indicators were consistent. Correlation coefficients were used to indicate the degree to which variation in the patient care indicator scores for rater one was related to variation in the patient care indicator scores for rater two. Pearson product-moment correlations for the scores of rater one vs rater two are shown in Table 11. Significance tests are reported for each coefficient and were derived from the students t with N-2 degrees of freedom. Most of the coefficients achieved significance at the .05 level or better. Significant correlations were obtained on 44 of the 51 coefficients and should be interpreted with respect to sample size, especially in categories four and five.

Table 11

PSYCHIATRIC PATIENT CLASSIFICATION INSTRUMENT

INTERCORRELATIONS OF PATIENT CARE INDICATOR SCORES

	Psychiatric	Psychological	Neurological	Medication	Nutrition	Vital Signs/ Assessment	Patient Teaching	Diagnostic Tests	Hygiene	Elimination	Mobility/ Exercise	Other Therapeutic Activities/ Modalities
Category 1 (<1-1 hour) (df = 117)	r=.516 p<.001	r=.410 p<.001	r=.429 p<.001	r=.835 p<.001	r=.930 p<.001	r=.844 p<.001	r=.610 p<.001	r=.306 p<.01	r=.413 p<.001	No Entries	No Entries	r=.968 p<.001
Category 2 (2-3 hours) (df = 225)	r=.480 p<.001	r=.607 p<.001	r=.532 p<.001	r=.842 p<.001	r=.931 p<.001	r=.900 p<.001	r=.746 p<.001	r=.281 p<.01	No Entries	No Entries	No Entries	r=.857 p<.001
Category 3 (4-7 hours) (df = 59)	r=.450 p<.001	r=.822 p<.001	r=.490 p<.001	r=.835 p<.001	r=.874 p<.001	r=.949 p<.001	r=.845 p<.001	r=.708 p<.001	No Entries	No Entries	No Entries	r=.955 p<.001
Category 4 (8-11 hours) (df = 7)	r=.423 p n/s	r=.926 p<.001	r=.454 p n/s	r=.745 p<.02	r=.818 p<.01	r=.999 p<.001	r=.738 p<.05	r= 1 p<.001	No Entries	r=.413 p n/s	r=.999 p<.001	r=.790 p<.01
Category 5 (12-24 hours) (df = 12)	r=.472 p<.05	r=.760 p<.01	r=.789 p<.001	r=.744 p<.01	r=.952 p<.001	r=.780 p<.05	r=.608 p n/s	r=.413 p n/s	r=.413 p n/s	r=.106 p n/s	r=.110 p n/s	r=.999 p<.001

cont'd

E. CONCLUSIONS

The Psychiatric Patient Classification Subsystem has been developed and tested through four years of rigorous field research. This quantitative subsystem measures direct nursing care activities and determines the best mix by skill level of care providers for psychiatric inpatients. The Psychiatric Patient Classification Subsystem utilizes the factor-evaluation design, is multidimensional, and is designed for automated or manual implementation. Extensive validity and reliability studies demonstrate that the Psychiatric Patient Classification Subsystem is valid and reliable.

APPENDIX A

Psychiatric Patient Classification Instrument Mathematical Model

PSYCHIATRIC PATIENT CLASSIFICATION INSTRUMENT

MATHEMATICAL MODEL

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
PSYCHIATRIC:						
One hour of One-on-one observation - Arms length OR Constant/Close (60.0000)	(4) 240.0000 48	(8) 480.0000 96	(12) 720.0000 144	(16) 960.0000 192	(20) 1200.0000 240	(24) 1440.0000 288
Situational Observation (28.2554)	(1) 28.2554 6	(2) 56.5108 11	(3) 84.7662 17	(4) 113.0216 23	(5) 141.2770 28	(6) 169.5324 34
Appearance, Behavior & Conversation Assessment (2.2704)	(3) 6.8112 1	(6) 13.6224 3	(12) 27.2448 5	(24) 54.4896 11	(48) 108.9792 22	(96) 217.9584 44
Individual Support Therapy - All Nursing Personnel (15.0000)	(4) 60.0000 12	(6) 90.0000 18	(8) 120.0000 24	(12) 180.0000 36	(16) 240.0000 48	(24) 360.0000 72
Individual Therapy - Contract Interview/ Primary Therapist (30.0000)	(1) 30.0000 6	(2) 60.0000 12	(3) 90.0000 18			
Group Therapy (6.3554)	(1) 6.3554 1	(2) 12.7108 3				
Planned Recreational Activity Session (10.8809)	(1) 10.8809 2	(2) 21.7618 4				
Occupational Therapy, Nursing Support Required (15.0000)	(1) 15.0000 3	(2) 30.0000 6				
Patient Government Session (3.2659)	(1) 3.2659 1					
Intake Interview, Admission (30.0000)	(1) 30.0000 6					
Intake Interview, Interdisciplinary (30.0000)	(1) 30.0000 (6)					

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
PSYCHOLOGICAL:						
Orientation to Clinical Unit (4.7997)	(1) 4.7997 1	(2) 9.5994 2	(3) 14.3991 3			
Visiting with Patient/ Purposeful Interaction (2.1036)	(3) 6.3108 1	(6) 12.6216 3	(12) 25.2432 5	(24) 50.4864 10	(48) 100.9728 20	(96) 201.9456 40
Answering Patient s Question (1.0121)	(3) 3.0363 1	(6) 6.0726 1	(12) 12.1452 2	(24) 24.2904 5	(48) 48.5808 10	(96) 97.1616 19
Explanation of Procedures & Tests (1.7433)	(1) 1.7433 .5	(2) 3.4866 1	(3) 5.2299 1	(6) 10.4598 2	(9) 15.6897 3	(12) 20.9196 4
NEUROLOGICAL:						
Orientation (.9941)	(3) 2.9823 1	(6) 5.9646 1	(12) 11.9292 2	(24) 23.8584 5	(48) 47.7168 10	(96) 95.4336 19
Mental Alertness (.9056)	(3) 2.7168 .5	(6) 5.4336 1	(12) 10.8672 2	(24) 21.7344 4	(48) 43.4688 9	(96) 86.9376 17
Pupil Reflexes (.6611)	(1) .6611 .5	(2) 1.3222 .5	(3) 1.9833 .5	(6) 3.9666 1	(9) 5.9499 1	(12) 7.9332 2
Extrapyramidal Syndrome Assessment (1.6121)	(1) 1.6121 .5	(2) 3.2242 1	(3) 4.8363 1	(6) 9.6726 2	(9) 14.5089 3	(12) 19.3452 4
MEDICATION:						
Oral (.8085)	(1) .8085 .5	(2) 1.6170 .5	(3) 2.4255 .5	(4) 3.2340 1	(6) 4.8510 1	(8) 6.4680 1
Intramuscular (1.2259)	(1) 1.2259 .5	(2) 2.4518 .5	(3) 3.6777 1	(4) 4.9036 1	(6) 7.3554 1	(8) 9.8072 2
Subcutaneous (.9010)	(1) .9010 .5	(2) 1.8020 .5				

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Topical (1.2234)	(1) 1.2234 .5	(2) 2.4468 .5	(3) 3.6702 1	(4) 4.8936 1	(5) 6.1170 1	(6) 7.3404 1
Suppository, Rectal/Vaginal (1.4799)	(1) 1.4799 .5	(2) 2.9598 1	(3) 4.4397 1			
NUTRITION:						
Feeding (16.1591)	(1) 16.1591 3	(2) 32.3182 6	(3) 48.4773 10			
Serving Meal Tray, with Preparation (2.6073)	(1) 2.6073 1	(2) 5.2146 1	(3) 7.8219 2			
Serving Meal Tray, no Preparation (.3881)	(1) .3881 .5	(2) .7762 .5	(3) 1.1643 .5			
Snack (.8472)	(1) .8472 .5	(2) 1.6944 .5	(3) 2.5416 1			
Fluid (.9525)	(4) 3.8100 1	(6) 5.7150 1	(8) 7.6200 2	(10) 9.5250 2	(12) 11.4300 2	
Measuring & Recording Intake (.8583)	(3) 2.5749 1	(6) 5.1498 1	(8) 6.8664 1	(10) 8.5830 2	(12) 10.2996 2	
VITAL SIGNS/ASSESSMENT:						
Blood Pressure, Manual (1.0388)	(1) 1.0388 .5	(2) 2.0776 .5	(3) 3.1164 1	(6) 6.2328 1	(9) 9.3492 2	(12) 12.4656 2
Pulse - Apical (1.3296)	(1) 1.3296 .5	(2) 2.6592 1	(3) 3.9888 1			
Oral Temperature, Pulse, & Respirations (1.2903)	(1) 1.2903 .5	(2) 2.5806 1	(3) 3.8709 1	(4) 5.1612 1	(5) 6.4515 1	(6) 7.7418 2
Respirations (.6605)	(1) .6605 .5	(2) 1.3210 .5	(3) 1.9815 .5	(4) 2.6420 1	(5) 3.3025 1	(6) 3.9630 1

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Pulse - Radial/Brachial (.6727)	(1) .6727 .5	(2) 1.3454 .5	(3) 2.0181 .5	(4) 2.6908 1	(5) 3.3635 1	(6) 4.0362 1
Temperature - Oral, Electronic/Mercury (.9871)	(1) .9871 .5	(2) 1.9742 .5	(3) 2.9613 1	(6) 5.9226 1	(9) 8.8839 2	(12) 11.8452 2
Pulmonary Assessment (1.6746)	(1) 1.6746 .5	(2) 3.3492 1	(3) 5.0238 1			
Bowel Sound Assessment (1.5112)	(1) 1.5112 .5	(2) 3.0224 1	(3) 4.5336 1			
Ambulatory Weight (1.2309)	(1) 1.2309 .5					
PATIENT TEACHING:						
Teaching - Medication Administration (19.5881)	(1) 19.5881 4					
Teaching - Disease/ Condition Related (6.1507)	(1) 6.1507 1	(2) 12.3014 2	(3) 18.4521 4	(6) 36.9042 7	(9) 55.3563 11	(12) 73.8084 15
Teaching - Dietary Explanation (2.8633)	(1) 2.8633 1	(2) 5.7266 1	(3) 8.5899 2			
Teaching - Diagnostic Test (1.0804)	(1) 1.0804 .5	(2) 2.1608 .5	(3) 3.2412 1			
DIAGNOSTIC TESTS:						
Urine Testing - Sugar & Acetone/Specific Gravity/ Protein (1.0835)	(1) 1.0835 .5	(2) 2.1670 .5	(3) 3.2505 1	(4) 4.3340 1		
Venipuncture - Blood Sample (3.5175)	(1) 3.5175 1	(2) 7.0350 1	(3) 10.5525 2			
Urine Specimen - Routine/Clean Catch (1.9167)	(1) 1.9167 .5	(2) 3.8334 1				

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
HYGIENE:						
Bathing, Complete/Tub Bath (19.0858)	(1) 19.0858 4					
Bathing, Assist with Back & Legs (12.1010)	(1) 12.1010 2					
Sitting Shower/Shower with Assistance (16.7945)	(1) 16.7945 3					
AM Care/AM Care, Partial (5.6522)	(1) 5.6522 1					
Oral Hygiene (3.2428)	(1) 3.2428 1	(2) 6.4856 1	(3) 9.7284 2	(4) 12.9712 3	(5) 16.2140 3	(6) 19.4568 4
Skin Care (3.7631)	(1) 3.7631 1	(3) 11.2893 2	(6) 22.5786 5	(9) 33.8679 7	(12) 45.1572 9	
Back Rub (2.9718)	(1) 2.9718 1					
Shaving (6.2501)	(1) 6.2501 1					
PM Care (10.6934)	(1) 10.6934 2					
Occupied Bed (9.6977)	(1) 9.6977 2	(2) 19.3954 4	(3) 29.0931 6			
Unoccupied Bed (6.0472)	(1) 6.0472 1					
ELIMINATION:						
Measuring and Recording Output (.9666)	(3) 2.8998 1	(6) 5.7996 1	(9) 8.6994 2			
Giving a Urinal (1.9695)	(3) 5.9085 1	(6) 11.8170 2	(9) 17.7255 4			

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Giving a Bedpan	(1)	(2)	(3)	(6)	(9)	
(2.5998)	2.5998	5.1996	7.7994	15.5988	23.3982	
	1	1	2	3	5	
MOBILITY/EXERCISE:						
Mobility - Assistance	(1)	(2)	(3)	(6)	(9)	(12)
While Walking	4.2275	8.4550	12.6825	25.3650	38.0475	50.7300
(4.2275)	1	2	3	5	8	10
Changing Patient's	(2)	(4)	(6)	(8)	(10)	(12)
Position in Bed	4.2532	8.5064	12.7596	17.0128	21.2660	25.5192
(2.1266)	1	2	3	3	4	5
Exercise - Active	(2)	(4)	(6)	(8)	(10)	(12)
(7.0733)	14.1466	28.2932	42.4398	56.5864	70.7330	84.8796
	3	6	8	11	14	17
Placing Patient into	(1)	(2)	(3)			
Seclusion Room	5.4350	10.8700	16.3050			
(5.4350)	1	2	3			
Leather Restraint	(1)	(2)	(3)			
Application - 2 Point	5.9267	11.8534	17.7801			
(5.9267)	1	2	4			
Leather Restraint	(1)	(2)	(3)			
Application - 4 Point	17.0200	34.0400	51.0600			
(17.0200)	3	7	10			
Adjusting Restraint	(8)	(12)	(16)	(20)	(24)	
(1.2751)	10.2008	15.3012	20.4016	25.5020	30.6024	
	2	3	4	5	6	
Adjusting Siderail	(8)	(12)	(16)	(20)	(24)	
(.3767)	3.0136	4.5204	6.0272	7.5340	9.0408	
	1	1	1	2	2	

APPENDIX B

Psychiatric Patient Classification Instrument

a. Patient's Hospital Card

PSYCHIATRIC PATIENT CLASSIFICATION INSTRUMENT

TOTAL PCIS Points	WEIGHTED SCORE (Points)	CATEGORY (Circle One)
	1 - 23	1
	24 - 47	2
	48 - 95	3
	96 - 143	4
	144 - 288	5

b. Date: _____ c. Rater's Name: _____

PSYCHIATRIC

One hour of One-on-one Observation - Arms length OR Constant/Close	FREQUENCY	4	8	12	16	20	24
	SCORE	48	96	144	192	240	288

Only the above activity represents total care, no other nursing activity will be scored for the period of time the patient is under observation. If the weighted score is "288" the rating is complete. If not, proceed to the next nursing activity.

Situational Observation	FREQUENCY	1	2	3	4	5	6
	SCORE	6	11	17	23	28	34
Appearance, Behavior & Conversation Assessment		3	6	12	24	48	96
		1	3	5	11	22	44
Individual Support Therapy - All Nursing Personnel		4	6	8	12	16	24
		12	18	24	36	48	72

Individual Therapy - Contract Interview/ Interview/Primary Therapist	1	2	3
	6	12	18
Group Therapy	1	3	
Planned Recreational Activity Session	2	4	
Occupational Therapy- Nursing Support Required	3	6	
Patient Government Session.	1		
Intake Interview - Admission.	6		
Intake Interview - Interdisciplinary.	6		

PCIS [ ][ ][ ] . [ ]
13-15 16

PSYCHOLOGICAL

FREQUENCY	1	2	3			
Orientation to Clinical Unit. . . . . SCORE	1	2	3			

	3	6	12	24	48	96
Visiting with Patient/Purposeful Interaction	1	3	5	10	20	40
Answering Patient's Question	1	1	2	5	10	19

	1	2	3	6	9	12
Explanation of Procedures & Tests	.5	1	1	2	3	4

PCIS [ ][ ][ ] . [ ]
17-19 20

NEUROLOGICAL

FREQUENCY	3	6	12	24	48	96
Orientation . . . . . SCORE	1	1	2	5	10	19
Mental Alertness	.5	1	2	4	9	17

	1	2	3	6	9	12
Pupil Reflexes	.5	.5	.5	1	1	2
Extrapyramidal Syndrome Assessment	.5	1	1	2	3	4

PCIS [ ][ ][ ] . [ ]
21-23 24

MEDICATION

FREQUENCY	1	2	3	4	6	8
Oral. . . . . SCORE	.5	.5	.5	1	1	1
Intramuscular	.5	.5	1	1	1	2
Subcutaneous.	.5	.5				

	1	2	3	4	5	6
Topical	.5	.5	1	1	1	1
Suppository, Rectal/Vaginal	.5	1	1			

PCIS [ ][ ][ ] . [ ]
25-27 28

NUTRITION

FREQUENCY	1	2	3
Feeding . . . . . SCORE	3	6	10
Serving Meal Tray, With Preparation	1	1	2
Serving Meal Tray, No Preparation	.5	.5	.5
Snack	.5	.5	1

	4	6	8	10	12
Fluid	1	1	2	2	2

	3	6	8	10	12
Measuring & Recording Intake	1	1	1	2	2

PCIS [ ][ ][ ] . [ ]
29-31 32

VITAL SIGNS/ASSESSMENT

	FREQUENCY	1	2	3	6	9	12
Blood Pressure, Manual	SCORE	.5	.5	1	1	2	2
Pulse - Apical		.5	1	1			

	1	2	3	4	5	6
Oral Temperature, Pulse, & Respirations	.5	1	1	1	1	2
Respirations	.5	.5	.5	1	1	1
Pulse - Radial/Brachial	.5	.5	.5	1	1	1

	1	2	3	6	9	12
Temperature - Oral, Electronic/Mercury	.5	.5	1	1	2	2
Pulmonary Assessment	.5	1	1			
Bowel Sound Assessment	.5	1	1			
Ambulatory Weight	.5					

PCIS [ ][ ][ ] . [ ]
33-35 36

PATIENT TEACHING

	FREQUENCY	1
Teaching - Medication Administration	SCORE	4

	1	2	3	6	9	12
Teaching - Disease/Condition Related	1	2	4	7	11	15
Teaching - Dietary Explanation	1	1	2			
Teaching - Diagnostic Test	.5	.5	1			

PCIS [ ][ ][ ] . [ ]
37-39 40

DIAGNOSTIC TESTS

	FREQUENCY SCORE	1	2	3	4
Urine Testing - Sugar & Acetone/ Specific Gravity/Protein		.5	.5	1	1
Venipuncture - Blood Sample		1	1	2	
Urine Specimen - Routine/Clean Catch		.5	1		

PCIS [ ][ ][ ] . [ ]
41-43 44

HYGIENE

	FREQUENCY SCORE	1
Bathing, Complete/Tub Bath		4
Bathing, Assist with Back and Legs		2
Shower/Sitting Shower with Assistance		3
AM Care/AM Care, Partial		1

	1	2	3	4	5	6
Oral Hygiene	1	1	2	3	3	4

	1	3	6	9	12
Skin Care	1	2	5	7	9
Back Rub	1				
Shaving	1				
PM Care	2				

	1	2	3
Occupied Bed	2	4	6
Unoccupied Bed	1		

PCIS [ ][ ][ ] . [ ]
45-47 48

ELIMINATION

	FREQUENCY	3	6	9
Measuring & Recording Output.	SCORE	1	1	2
Giving a Urinal		1	2	4

	1	2	3	6	9
Giving a Bedpan	1	1	2	3	5

PCIS [ ][ ][ ] . [ ]
49-51 52

MOBILITY/EXERCISE

	FREQUENCY	1	2	3	6	9	12
Mobility - Assistance While Walking .	SCORE	1	2	3	5	8	10

	2	4	6	8	10	12
Changing Patient's Position in Bed.	1	2	3	3	4	5
Exercise - Active	3	6	8	11	14	17

	1	2	3
Placing Patient into Seclusion Room	1	2	3
Leather Restraint Application - 2-Point . . .	1	2	4
Leather Restraint Application - 4-Point . . .	3	7	10

	8	12	16	20	24
Adjusting Restraints.	2	3	4	5	6
Adjusting Siderails	1	1	1	2	2

PCIS [ ][ ][ ] . [ ]
53-55 56

Locate required nursing activity on the Psychiatric Nursing Activities Tasking Document and calculate total points based on the weighted score provided. (Specify activity(s) and Total Score(s)).

THERAPEUTIC ACTIVITIES/MODALITIES (OTHER)

Nursing Activity	Frequency Rate	X	Score	=	Sub-Total
_____	____	X	____	=	____
_____	____	X	____	=	____
_____	____	X	____	=	____

PCIS [ ][ ][ ] . [ ]
57-59 60

APPENDIX C

Psychiatric Patient Classification Instrument Instructional Information

PSYCHIATRIC PATIENT CLASSIFICATION INSTRUMENT

INSTRUCTIONAL INFORMATION

1. Demographic Information:

a. Stamp the Psychiatric Patient Classification Instrument with the patient's Hospital Card in the space provided.

b. Record the date of the data collection period. Note that the rater completes this form at the end of the 24-hour period.

c. Record the rater's name in the appropriate blank.

d. Utilize the keypunch spaces 1 through 12 to collect data which best meets the requirements for your medical treatment facility. This demographic data could include the following:

(1) Age of Patient

(2) Sex of Patient

(3) Day of the Week

(4) SI or VSI Status

(5) Clinical Service

2. The Psychiatric Patient Classification Instrument is an objective factor evaluation designed rating instrument. Extensive clinical observation combined with time and frequency studies were undertaken to identify those direct nursing care activities which most influence the total patient care requirements. These groupings of nursing activities, listed below, are considered to be Patient Care Indicators. Each nursing activity is operationally defined in the attached Tasking Document. The sum of the total points within each patient care indicator will become the Patient Care Indicator Score (PCIS).

a. Psychiatric

b. Psychological

c. Neurological

d. Medication

e. Nutrition

f. Vital Signs/ Assessment -

g. Patient Teaching

h. Diagnostic Test

i. Hygiene

j. Elimination

k. Mobility/Exercise

l. Therapeutic Activities/Modalities (Includes "Other" nursing activities)

3. The patient classification instrument is simple in that the professional nurse needs only to rate those nursing activities which are appropriate for the patient being rated. The nursing activities scored on the instrument must have been performed by nursing personnel or assistance provided to other staff members performing the activity. If the patient performs self-care activities, then score only those nursing activities performed by nursing personnel. Each patient needs only one rating for each 24-hour period. The rating of each patient must be completed at the end of the 24-hour period and must reflect the nursing care requirements for the preceding 24 hours. The normal rating period will be 0700 to 0700 hours, however, patients who are hospitalized less than 24 hours must also be rated. The ratings of these patients must be reflective of the time period that the patient was present within the hospital system.

4. The actual rating of each patient is accomplished by selecting the frequency rate for each nursing activity that was required during the rating period. The rating of the patient on the classification instrument is then accomplished by selecting the frequency rate from the options provided on the instrument. Select the frequency rate for each nursing activity that best meets the care requirements for the patient being rated. Each frequency rate has a corresponding point value (weighted score) as denoted in the blocks below each frequency rate.

EXAMPLE:

PSYCHIATRIC

	FREQUENCY	4	8	12	16	20	24
One hour of One-on-one Observation - Arms length OR Constant/Close	SCORE	48	96	144	(192)	240	288

This nursing activity with a frequency of "16" will receive a weighted score of "192". Since this activity alone represents total care, no other nursing activities will be scored during the period of time the patient is under observation. If the frequency rate is "24" you have completed the rating.

After circling the weighted score for each appropriate nursing activity, sum the scores within each Patient Care Indicator. Record this point value in the space provided as indicated in the following example:

EXAMPLE:

MEDICATION

	FREQUENCY	1	2	3	4	6	8
Oral	SCORE	.5	.5	(.5)	1	1	1
Intramuscular		(.5)	.5	1	1	1	2
Subcutaneous		.5	.5				

	1	2	3	4	5	6
Topical	.5	.5	1	1	1	1
Suppository, Rectal/Vaginal	.5	1	1			

PCIS = [ ][ ][ ] . [ ]
25-27 28

This Patient Care Indicator (MEDICATION) consists of "3" oral and "1" intramuscular for a total of "1" point.

5. If the patient requires a nursing activity that is not included on the Psychiatric Patient Classification Instrument, this additional procedure should be followed:

Locate the Nursing Activity Tasking Document (pages 12 thru 20) and obtain the weighted score (points) for that activity. This point value is for a frequency of "1", therefore, you must then multiply that figure by the appropriate frequency rate.

EXAMPLE:

SKIN

SMALL DRESSING CHANGE, LESS THAN 4" x 8": Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, and then remove equipment from area. 1

Should the patient require three small dressing changes during the 24-hour rating period, multiply the frequency "3" times the weighted score of "1". Indicate the activity(s) selected and the total point value clearly on the instrument (i.e., Small dressing change = 3).

6. The Total PCIS Points (sum of the Patient Care Indicator Scores) determines the Patient's Category of Care. Indicate the Total PCIS Points and circle the appropriate category on page 1 of the Patient Classification Instrument.

EXAMPLE:	TOTAL PCIS Points	WEIGHTED SCORE (Points)	CATEGORY (Circle One)
	47.5	1 - 23	1
		24 - 47	(2)
		48 - 95	3
		96 - 143	4
		144 - 288	5

ROUND DOWN THE FRACTIONS: For example, anything less than "48" TOTAL PCIS Points will have the weighted score of "47" and will remain category "2".

7. The Psychiatric Patient Classification - Tabulation Form was developed for the recording of the Patient Care Indicator Scores (PCIS). These scores are to be recorded on this tabulation form along with the patient's bed number, age, and name.

Psychiatric Patient Classification Tabulation Form

CATEGORY SUMMARY BLOCK

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO.OF CASES
1 - 23	<1 - 1	1	
24 - 47	2 - 3	2	
48 - 95	4 - 7	3	
96 - 143	8 - 11	4	
144 - 288	12 - 24	5	

Nursing Unit _____

Date _____

Rater's Signature _____

Patient Care Indicators Scores

Bed No.	Age	Name of Patient	Psychiatric	Psychological	Neurological	Medication	Nutrition	Vital Signs/ Assessment	Patient Teaching	Diagnostic Test	Hygiene	Elimination	Mobility/ Exercise	Other/ Therapeutic Activities/ Modalities	Total PCIS Score	Category of Care

PSYCHIATRIC NURSING ACTIVITIES TASKING DOCUMENT

Each operational definition includes: (1) Identify and screen the patient; (2) Explain the procedure to the patient; (3) Raise, lower, or adjust the bed before and after the nursing activity; and (4) Clean and straighten area.

PSYCHIATRIC:	SCORE
ONE HOUR OF ONE-ON-ONE OBSERVATION - ARMS LENGTH: Assignment of one member of the nursing team to one patient. Patient requires constant evaluation as to: (1) general appearance, manner, and attitude; (2) consciousness; (3) activity; (4) affect; (5) thought disturbance; (6) memory and; (7) judgement and insight. The safety of the patient is of utmost importance. OR ONE HOUR OF CONSTANT/CLOSE OBSERVATION: Assignment of one member of the nursing team to constantly evaluate the patient. The observations should include the following: (1) general appearance, manner, and attitude; (2) consciousness; (3) activity; (4) affect; (5) thought disturbances; (6) memory and; (7) judgment and insight.	12
SITUATIONAL OBSERVATION: Assignment of one member of the nursing team to observe and provide nursing care to the patient during a specific activity. Observation required only during the specific activity. This might include, but is not limited to, transport within or without the hospital when the patient is not stable enough to be left without nursing support.	6
APPEARANCE, BEHAVIOR AND CONVERSATION ASSESSMENT: Upon arrival in the ward day room area, the individual assigned this task will observe a group of patients for appearance, behavior and conversation.	.5
INDIVIDUAL SUPPORT THERAPY - ALL NURSING PERSONNEL: Upon contact with patient, assesses mental status and: (1) inquires within the framework of interviewing that will give information about the patient's prevailing need or problem, permits ventilation of feelings and thoughts, clarifies or interprets information, provides suggestions or instructions, intervenes actively as necessary; (2) encourages patient involvement in treatment activities and provides psychological support by participating with patient in these activities; and (3) encourages resocialization by participating with patient during meals, coffee break, shopping, walks, etc.	3
INDIVIDUAL THERAPY - CONTRACT INTERVIEW/PRIMARY THERAPIST: Refers to the assignment of a nursing team member to a patient throughout patient's hospitalization. The assignment includes developing a therapeutic relationship; formulating goals and interventions; evaluating treatment process.	6
GROUP THERAPY: Upon arrival in the therapy room, assumes the role of leader/co-leader for group therapy	1

PSYCHIATRIC CONT:	SCORE
PLANNED RECREATIONAL ACTIVITY SESSION: Assignment of a number of the nursing team to supervise the patients during the activity.	2
OCCUPATIONAL THERAPY, NURSING SUPPORT REQUIRED: Refers to the assignment of nursing team member to accompany patients to occupational therapy activities to provide safety and security support, to encourage and/or assist patient to participate in activity and to actively participate with patients in therapeutic athletics; assesses patient's reactions and participation level at these activities.	3
PATIENT GOVERNMENT SESSION: Upon arrival in the conference room, stays as resource person to the patients during the patient government session.	1
INTAKE INTERVIEW, ADMISSION: Refers to the assignment of a nursing team member to admit a patient to the Nursing Unit. This admission procedure should include the following: (1) observation of physical abnormalities and identifying features; (2) mental status survey; and (3) obtaining past and present history of illness and treatment.	6
INTAKE INTERVIEW, INTERDISCIPLINARY: Upon arrival in the conference room, provides nursing input, discusses and collaborates with members of the interdisciplinary team in developing a treatment plan for and with the patient.	6
PSYCHOLOGICAL:	
ORIENTATION TO CLINICAL UNIT: Instructing on the use of the nurse's call system, the hospital bed, and the layout of the physical facility.	1
VISITING WITH PATIENT/PURPOSEFUL INTERACTION: Time spent at patient's bedside without providing any direct physical care to patient which is not in response to patient call system or patient questions.	.5
ANSWERING PATIENT'S QUESTION: Time spent in answering patient's question or in response to the patient call system.	.5
EXPLANATION OF PROCEDURES AND TESTS: Instructing patient on what he/she can expect from procedure/test, what the health care personnel will be doing during the procedure/test, and why such procedure/test is being done.	.5

NEUROLOGICAL:	SCORE
ORIENTATION: Upon arrival at bedside, make inquiries within the framework of interviewing that will give information about patient's orientation for time, place and person, and then record results.	.5
MENTAL ALERTNESS: Upon arrival at bedside, make inquiries within the framework of interviewing that will give information about the patient's orientation, memory, intellectual performance, and judgment; then record results.	.5
PUPIL REFLEXES: Place equipment at bedside, adjust room lighting, assess pupillary reflexes with flashlight and remove equipment from area.	.5
EXTRAPYRAMIDAL SYNDROME ASSESSMENT: Upon arrival at bedside, assess muscle tone and associated movement, i.e., appearance (tremor at rest, poverty of motion); muscle tone (increased), voluntary movement (strength normal or decreased), coordination (slowed), and reflexes if indicated.	.5
MEDICATION:	
ORAL: Upon arrival at bedside, obtain a glass of water and administer the oral medication.	.5
INTRAMUSCULAR: Place equipment at bedside, locate site for injection, administer medication, and then remove equipment from area.	.5
SUBCUTANEOUS: Place equipment at bedside, locate site for injection, administer medication, and then remove equipment from area.	.5
TOPICAL: Place equipment at bedside, locate and expose site for topical application of medication, apply medication, and then remove equipment from area.	.5
SUPPOSITORY, RECTAL/VAGINAL: Place equipment at bedside, prepare and administer suppository; then remove equipment from area.	.5
NUTRITION:	
FEEDING: Place meal tray at bedside; place towel or napkin as bib; prepare the food, feed patient slowly with appropriate utensils; then remove tray from area.	3
SERVING MEAL TRAY, WITH PREPARATION: Place tray at bedside, prepare food and utensils, and prepare towel or napkin as bib.	1

NUTRITION CONT:	SCORE
SERVING MEAL TRAY, NO PREPARATION: Place tray at bedside.	.5
SNACK: Place snack at bedside and, if required, prepare food for eating.	.5
FLUID: Place fluid at bedside, place plastic drinking tube in liquid, give liquid to patient, then remove drinking cup and/or place within reach at patient's bedside.	.5
MEASURING & RECORDING INTAKE: Place calibrated cylinder/container at bedside; measure or calculate fluids and record amount on Intake and Output Record; then remove used equipment from area.	.5
VITAL SIGNS/ASSESSMENT:	
BLOOD PRESSURE, MANUAL: Place equipment at bedside, place cuff around extremity, position stethoscope, measure blood pressure, remove cuff, record results; remove equipment from area.	.5
PULSE - APICAL: Place equipment at bedside, place stethoscope over apex of heart and count rate, remove stethoscope, record pulse rate, and then remove equipment from area.	.5
ORAL TEMPERATURE, PULSE AND RESPIRATIONS: Place equipment at bedside, position temperature probe or thermometer. Place fingers over radial artery pulse and count rate. Count respiratory rate while fingers are placed over radial artery pulse. Remove fingers from radial artery pulse area, record results of measurements, and then remove equipment from area.	.5
RESPIRATIONS: Count respiratory rate, and/or count and calculate rate, and then record.	.5
PULSE - RADIAL/BRACHIAL: Place fingers over radial pulse or bracheal pulse, and count rate. Remove fingers from pulse area and record results.	.5
TEMPERATURE - ORAL, ELECTRONIC/MERCURY: Place equipment at bedside, place probe or thermometer under tongue, measure temperature, remove temperature probe or thermometer, record and then remove equipment from area.	.5
PULMONARY ASSESSMENT: Upon arrival initiates assessment by auscultation of the lungs, and/or percussion of the chest wall over the involved areas. Assess symmetry of chest and determine if respiratory movement is abdominal or thoracic.	.5
BOWEL SOUND ASSESSMENT: Upon arrival at bedside, utilize a stethoscope to assess status of bowel sounds, then remove equipment from area.	.5

VITAL SIGNS/ASSESSMENT CONT:	SCORE
AMBULATORY WEIGHT: Place equipment at bedside, assist patient onto the scales, balance scales, read and record weight reading, assist patient off the scales, and then remove equipment from area.	.5
PATIENT TEACHING:	
TEACHING - MEDICATION ADMINISTRATION: Upon arrival at bedside, provide instruction on dosage, route, and specific drug related information.	4
TEACHING - DISEASE/CONDITION RELATED: Upon arrival at bedside, provide instruction on the nature and scope of the disease process, special care requirements, limitations and/or restrictions related to disease or illness.	1
TEACHING - DIETARY EXPLANATION: Upon arrival at bedside, provide instruction on dietary requirements/restrictions.	1
TEACHING - DIAGNOSTIC TEST: Upon arrival at the bedside, provide information on the purpose and requirements for the diagnostic test.	.5
DIAGNOSTIC TESTS:	
URINE TESTING - SUGAR & ACETONE: Place equipment at bedside, collect urine sample, measure sugar and acetone, record results, then remove equipment from area. OR URINE TESTING - SPECIFIC GRAVITY: Place equipment at bedside, collect urine sample and utilizing a urometer, measure specific gravity, record results, and then remove equipment from area. OR URINE TESTING - PROTEIN: Upon arrival at bedside, collect urine sample, utilizing test strip assess for albumin, compare test strip against standard, read and record results; then remove used equipment from area.	.5
VENIPUNCTURE - BLOOD SAMPLE: Place equipment at bedside. Apply tourniquet to extremity, cleanse site, perform venipuncture and withdraw blood sample, and then apply pressure to puncture site. Apply labels on blood tubes and remove equipment from area.	1

DIAGNOSTIC TESTS CONT:	SCORE
URINE SPECIMEN - ROUTINE: Place equipment at bedside, instruct patient on how to collect specimen, label specimen, and then remove specimen from area. OR URINE SPECIMEN - CLEAN CATCH/FOLEY: Place equipment at bedside, instruct patient on how to collect specimen or collect sample from Foley catheter, label specimen, and then remove specimen from area.	.5
HYGIENE:	
BATHING, COMPLETE: Place equipment at bedside; remove pajamas, bathe face, chest, abdomen and extremities; change water, bathe back, buttocks and perineal area; replace pajamas; and remove equipment from area. OR TUB BATH: Upon arrival in bathroom, assist patient in undressing, into bathtub, with bath and assist in redressing; then back into the wheelchair. (Nursing personnel must be in constant attendance.)	4
BATHING, ASSIST WITH BACK & LEGS: Place equipment at bedside; remove pajamas, allow for patient bathing as if in attendance; change water; then bathe back and lower extremities; replace pajamas and remove equipment from area.	2
SITTING SHOWER/SHOWER WITH ASSISTANCE: Upon arrival in the shower room, assist patient in undressing, into shower, with bath and hair shampoo, assist in redressing, and back into the wheelchair. (Must remain with patient and provide assistance during the entire procedure.)	3
AM CARE: Place equipment at bedside, assist patient with bathing face, hands, and brushing teeth; then remove equipment from area. OR AM CARE, PARTIAL: Place equipment at bedside, prepare bath water put tooth paste on tooth brush; and remove equipment from area when patient has completed AM Care.	1
ORAL HYGIENE: Place equipment at bedside, turn patient to his/her side, cleanse gums, teeth and mouth with swabs, then remove equipment from area.	1
SKIN CARE: Place equipment at bedside, cleanse and dry areas for special care, apply lotion, and then remove equipment from area. (Buttocks, hips, shoulders, heels.)	1
BACK RUB: Place equipment at patient's bedside, remove pajama top, turn patient to expose back, rub back with lotion, replace pajama top, and then remove equipment from area.	1
SHAVING: Place equipment at bedside; wet and lather face/or use an electric razor and shave face; then remove equipment from area.	1

HYGIENE CONT:	SCORE
PM CARE: Place equipment at bedside; bathe face and hands, brush teeth, and rub back; tighten and straighten bed linens; then remove equipment from area.	2
OCCUPIED BED: Place linen at bedside; turn patient on side, roll linen to one side of bed, replace with clean linen, turn patient to freshly made side of bed, remove soiled linen and complete bed making; then remove soiled linen from bed.	2
OR	
UNOCCUPIED BED: Place linen at bedside, remove soiled linen, place bottom sheet on mattress, then place on top sheet; change pillow cases; remove soiled linen from area.	1
ELIMINATION:	
MEASURING AND RECORDING OUTPUT - URINE: Place calibrated cylinder at bedside; measure or calculate volume, record amount on Intake and Output Record; then remove equipment from area.	.5
OR	
MEASURING & RECORDING OUTPUT - VOMITUS: Remove emesis basin from patient's bedside, measure vomitus in calibrated cylinder, record amount on Intake and Output Record.	
GIVING A URINAL: Place urinal at patient's bedside, remove cover, adjust patient's pajamas for placement of urinal, remove urinal from patient, replace cover; then remove urinal from area.	.5
GIVING A BEDPAN: Place bedpan at bedside, place patient on bedpan, provide toilet tissue, remove patient from bedpan, cover bedpan, and remove from area.	1
MOBILITY/EXERCISE:	
MOBILITY - ASSISTANCE WHILE WALKING: Assist patient into a sitting position on side of bed, then into an upright standing position, then with ambulation, and then back into bed.	1
CHANGING PATIENT'S POSITION IN BED: Remove support pillows, reposition patient; apply support pillows.	.5
EXERCISE - ACTIVE: Supervise the patient as he/she actively performs the prescribed exercise program.	1
PHYSICALLY PLACING PATIENT INTO THE SECLUSION ROOM: Upon arrival at the patient's area, manually restrain patient, and then transport into the seclusion room.	1

MOBILITY/EXERCISE CONT: SCORE

LEATHER RESTRAINT APPLICATION - TWO-POINT RESTRAINT: Place equipment at bedside, position patient, as applying leather restraints to two of the extremities. Assess patient's reactions and/or adjustment to the restraints. 1

LEATHER RESTRAINT APPLICATION - FOUR-POINT RESTRAINT: Place equipment at bedside, position patient, as applying leather restraints to all four extremities. Assess patient's reaction and/or adjustment to the restraints. 3

ADJUSTING RESTRAINT: Upon arrival at bedside, replace or apply restraints to upper and/or lower extremities, and then depart from area. .5

ADJUSTING SIDERAIL: Changing position of siderail , i.e., up, down, or removal. .5

OTHER NURSING ACTIVITIES WHICH MAY BE UTILIZED TO DETERMINE CATEGORY OF CARE:

HYGIENE:

AM CARE, UTENSILS PROVIDED: Place equipment at bedside, and then remove equipment from area when patient finishes AM Care. .5

BATHING, UTENSILS PROVIDED: Place equipment at bedside, allow time for patient to bathe and change pajamas; then remove equipment from area. 1

NAIL CARE: Place equipment at bedside, wash hands/feet and nails, trim and clean finger/toe nails, remove equipment from area. 1

SHAMPOO: Place equipment at bedside; position patient, wet hair and apply shampoo, lather and rinse, dry hair with towel, comb and brush hair; and then remove equipment from area. 2

CHANGING BOTTOM SHEET: Place linen at bedside, remove bottom sheet, replace with clean sheet, straighten top sheet; then remove soiled linen from area. 1

CHANGING TOP SHEET: Place linen at bedside, remove top sheet, replace with clean sheet; then remove soiled linen from area. .5

CHANGING BED LINEN PROTECTOR/CHUX: Upon arrival at bedside, position patient, remove soiled chux, place clean chux under patient, straighten bed; then remove used chux from area. .5

NUTRITION:	SCORE
SPECIAL FEEDING - NASOGASTRIC: Place feeding at bedside, unclamp tube, assess placement of tube, administer tube feeding, flush tube with water, clamp tube, record, and then remove feeding equipment from area.	1
ELIMINATION:	
INCONTINENT CARE: Place equipment at patient's bedside, bathe buttocks, perineum and thighs; change bedding; then remove equipment and soiled linen from area.	1
MOBILITY/EXERCISE:	
MOBILITY - AMBULATING FIRST TIME: Assist patient into sitting position on side of bed; then into upright standing position; walk with patient; then assist patient back into bed.	1
MOBILITY - BED TO FLOOR: Assist patient into sitting position on side of bed, then slowly bring patient into an upright position; then assist back into bed.	.5
MOBILITY - BED TO CHAIR: Position chair/wheelchair at bedside, assist patient into sitting position, slowly bring patient into an upright standing position; then assist into chair/or reverse process.	.5
MOBILITY - SITTING ON SIDE OF BED: Assist patient into sitting position on side of bed; then assist patient back into supine position.	.5
MOBILITY - BED TO STRETCHER: Place stretcher at bedside, transfer patient to stretcher, fasten safety straps or adjust side rail, remove stretcher from bedside (or reverse procedure).	.5
ADJUSTING POSITION OF BED: Raise, lower or adjust position of bed.	.5
PHYSIOLOGICAL:	
TEMPERATURE - RECTAL, ELECTRONIC/MERCURY: Place equipment at bedside, adjust clothing, insert temperature probe or thermometer in anus, measure temperature, remove temperature probe or thermometer, record, and then remove equipment from area.	.5
TEMPERATURE - AXILLARY, ELECTRONIC/MERCURY: Place equipment at bedside, place temperature probe or thermometer in axillary area, measure temperature, remove temperature probe or thermometer, record and then remove equipment from area.	.5
PULSE - PEDAL/FEMORAL/POPITEAL: Place fingers on the dorsalis pedis artery pulse, femoral or popiteal pulse, and count rate. Remove fingers from area and record results.	.5

PHYSIOLOGICAL CONT:	SCORE
PULSE - DOPPLER: Place equipment at bedside, place sensor over pulse area, assess and record pulse rate; then remove equipment from area. (Types of equipment may vary.)	1
ABDOMINAL GIRTH MEASUREMENT : Upon arrival at bedside, expose abdominal area, measure girth, record and then depart from area.	.5
EXTREMITY CIRCUMFERENCE MEASUREMENT : Upon arrival at bedside, place tape measure around the extremity/extremities and assess measurement; then record results.	.5
HEART SOUNDS ASSESSMENT: Place stethoscope at bedside, arrange pajamas for visual access of chest, assess and record findings; remove stethoscope from area.	.5
MOTOR/SENSORY TESTING: Upon arrival at the bedside, assess extremities for sensation awareness and muscle strength.	.5
THERAPEUTIC ACTIVITIES/MODALITIES:	
GASTROINTESTINAL:	
NASOGASTRIC TUBE - INSERTION: Place equipment at bedside, secure towel around patient's neck, give patient glass of water, instruct patient on how to swallow tube, lubricate tube, insert tube, assess for placement, tape in position, then remove equipment from area/or when non-responsive omit glass of water and instructions.	2
NASOGASTRIC TUBE - IRRIGATION: Place irrigation solution at bedside, unclamp or disconnect tube, irrigate tubing with asepto syringe, reclamp or reconnect tubing; then remove equipment from area.	.5
NASOGASTRIC TUBE - INSTILLATION: Place medication, and/or normal saline at bedside, unclamp or disconnect tube, instill solution with asepto syringe, reclamp or reconnect tubing; then remove equipment from area.	.5
NASOGASTRIC TUBE - REMOVAL: Place towel around patient's neck, position patient, remove tape, clamp tube and remove tubing, and then remove equipment from area.	.5
ENEMA - CLEANSING: Place equipment at bedside, position patient, lubricate tubing, insert rectal tube, administer solution; then remove equipment from area.	1
ENEMA - RETENTION: Place equipment at bedside, position patient, administer solution; then remove equipment from area.	.5
COLOSTOMY - IRRIGATION: Place equipment at bedside, remove colostomy bag/dressing, administer irrigation solution, allow for return of fluid and feces, cleanse skin and stoma, reapply colostomy bag/dressing; then remove equipment from area.	5

GASTROINTESTINAL CONT:	SCORE
DRESSING CHANGE - COLOSTOMY: Place equipment at bedside, remove soiled dressing, cleanse skin and stoma, apply clean dressing, and then remove equipment from area.	2
DRESSING CHANGE - ILEOSTOMY/ILEOCONDUIT: Place equipment at bedside, remove ileostomy bag or dressing, cleanse skin and stoma area, replace ileostomy bag or dressing, and remove equipment from area.	2
LAVAGE: Place equipment at bedside, secure towel around patient's neck, insert stomach tube, assess placement, lavage gastric contents, remove tube, and then remove equipment from area.	4
FECAL IMPACTION ASSESSMENT/REMOVAL: Upon arrival at bedside, position patient, put-on rubber gloves, assess for fecal impaction and then manually break-up fecal mass; then remove used equipment from area.	1
RESPIRATORY:	
OXYGEN ADMINISTRATION - MASK: Place equipment at bedside, turn on oxygen, fit the mask over the mouth and nose, adjust headband, evaluate fit and patient's adjustment to the equipment, and regulate oxygen flow rate. OR OXYGEN ADMINISTRATION - PRONGS: Place equipment at bedside, fit nasal prongs and adjust headband, regulate oxygen rate; evaluate patient's adjustment to oxygen and equipment.	.5
SUCTIONING - ORAL: Place equipment or set-up equipment at bedside, suction oral cavity with suction catheter/or oral suction tip, flush catheter before and after each aspiration, replace used equipment, and remove used equipment from area.	.5
IPPB TREATMENT: Place equipment in position of use, assist patient during the treatment, and replace equipment after use.	2
CHEST PULMONARY THERAPY - FRAPPAGE WITH POSTURAL DRAINAGE: Upon arrival at bedside, position patient, initiate treatment by auscultation of lung fields. Perform percussion to each involved segment followed by vibration.	1
INCENTIVE SPIROMETER: Place spirometer at bedside, assist patient during the procedure to determine proper usage of spirometer, and then remove or replace to storage area at bedside.	1
BLOW BOTTLES: Place equipment at bedside, assist with placement of bottles, have patient perform procedure; then locate equipment at bedside for next treatment.	1
COUGH AND DEEP BREATHE: Upon arrival at bedside, have patient cough and deep breathe, if cough productive then dispose of sputum.	.5

RESPIRATORY CONT:	SCORE
INTUBATION; Place equipment at bedside, assist physician during the intubation process, tape endotracheal tube in place and remove equipment from area.	3
RESPIRATORY RESUSCITATION: Place equipment at bedside. Check all equipment, assist physician with insertion of endotracheal/tracheostomy tube, bag breathe as indicated, connect respirator; then remove equipment from area.	7
CARDIOVASCULAR:	
INTRAVENOUS INFUSION - INITIATING: Place equipment at bedside, apply tourniquet to extremity, cleanse site, perform venipuncture and connect IV tubing, apply ointment and dressing, and tape securely. Calculate and regulate flow rate, record on Intake and Output record, and remove equipment from area.	2
INTRAVENOUS INFUSION - CHANGE IV BOTTLE: Place equipment at bedside, remove used IV container and replace with new IV container, calculate and regulate flow rate, record on I&O record, and remove equipment from area.	.5
INTRAVENOUS INFUSION - INFUSION PUMP SETUP: Place equipment at bedside, set-up IV tubing and adjust flow rate dial. Record on I&O record and remove used equipment from area.	1
INTRAVENOUS INFUSION - FLOW RATE: Upon arrival at bedside, calculate and adjust flow rate as specified.	.5
INTRAVENOUS INFUSION - IV CATHETER CARE: Place equipment at bedside, remove dressing from IV catheter site, cleanse skin, apply ointment, replace dressing and then date, time and initial the dressing, change IV tubing, and remove equipment from area.	2
INTRAVENOUS INFUSION - PIGGY-BACK MEDICATION: Place equipment at bedside, select site for administration of solution utilizing existing systems, record on Intake and Output record, and remove equipment from area.	.5
INTRAVENOUS INFUSION - IV PUSH MEDICATION: Place equipment at bedside, select site for injection of solution utilizing existing system, administer IV solution, and remove equipment from area.	.5
INTRAVENOUS OR ARTERIAL LINE - TERMINATION: Place equipment at bedside, remove dressing and terminate IV or arterial catheter/needle, apply pressure to site, and record on I&O if appropriate. Remove equipment from area.	1

CARDIOVASCULAR CONT:	SCORE
ELASTIC STOCKINGS: Place stockings at bedside. Expose lower extremities, and then put elastic stockings on lower extremities.	1
ACE BANDAGE: Place equipment at bedside, wrap extremity securely with ace bandage and secure in place with tape or metal hooks.	1
CARDIOPULMONARY RESUSCITATION: Upon arrival at bedside, perform any or all aspects of cardiopulmonary resuscitation.	12

SKIN:	
SMALL DRESSING CHANGE, LESS THAN 4" x 8": Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, and then remove equipment from area.	1
LARGE DRESSING CHANGE, 4" x 8" OR GREATER: Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, and then remove equipment from area.	2
REINFORCING DRESSING: Place equipment at bedside, apply dressing to present dressing for reinforcement, and then remove equipment from area.	1
WOUND IRRIGATION: Place equipment at bedside, remove soiled dressing, irrigate and cleanse site, apply dressing and then remove equipment from area.	3
WOUND CULTURE: Place equipment at bedside, remove soiled dressing, obtain culture from site, label culture, apply new dressing, and then remove equipment from area.	.5
SUTURE/SKIN CLIP REMOVAL, LESS THAN 15: Place equipment at bedside, remove dressing if required, remove sutures or skin clips, and then remove equipment from area.	1
SUTURE/SKIN CLIP REMOVAL, 15 OR MORE: Place equipment at bedside, remove dressing if required, remove sutures, and then remove equipment from area.	3
HOT COMPRESS: Place equipment at bedside, apply hot compress to site, and then remove equipment from area.	1
COLD COMPRESS : Place equipment at bedside, apply cold compress to site and then remove equipment from area.	2
	.5

SKIN CONT:	SCORE
SOAKING HAND: Place equipment at bedside, soak hand in solution basin, remove and towel dry hand, and then remove equipment from area.	2
SOAKING FEET: Place equipment at bedside, soak foot in solution basin, remove and towel dry foot/feet, and remove equipment from area.	1
HEAT LAMP: Place or position lamp at bedside, expose site, and apply heat lamp.	.5
APPLICATION OF K-PAD: Upon arrival at bedside, apply K-Pad to prescribed area, then depart from area.	.5
SITZ BATH: Prepare sitz bath equipment, assist patient into sitz bath tub, assist patient from the tub and towel dry, and then assist patient back into bed.	2
DECUBITUS CARE: Place or position equipment at bedside, cleanse skin, apply heat lamp and/or expose to light.	2
DEATH CARE: Place equipment at bedside, prepare patient and cover with shroud.	5
EENT:	
EYE CARE: Place equipment at bedside, cleanse eyes and apply solution/ointment as prescribed. Apply eye patch and then remove equipment from area.	.5
IRRIGATIONS - EYE: Place equipment at bedside, prepare eye for irrigation, utilizing syringe and basin irrigate eye/eyes, and then remove equipment from area.	1
IRRIGATIONS - EAR: Place equipment at bedside. Utilizing syringe and basin, irrigate ear. Remove equipment from area.	.5
IRRIGATIONS - THROAT: Place equipment at bedside, have patient gargle the prescribed solution, and then remove equipment from area.	.5
INSTILLATION OF DROPS - EYE: Upon arrival at bedside, position patient, instill eye drops, and then remove equipment from area.	.5
INSTILLATION OF DROPS - EAR: Upon arrival at bedside, position patient, instill ear drops, and then remove equipment from area.	.5
INSTILLATION OF DROPS - NOSE: Upon arrival at bedside, position patient, instill nose drops, and then remove equipment from area.	.5

EENT CONT:	SCORE
CULTURE - NOSE: Place equipment at bedside, position patient, obtain nose culture, label culture, and remove equipment from area.	.5
CULTURE - THROAT: Place equipment at bedside, position patient, obtain culture, label culture, and remove equipment from area.	.5
CULTURE - SPUTUM: Place equipment at bedside, position patient, have patient cough to obtain sputum, apply label to sputum specimen, and then remove equipment from area.	.5
NEUROLOGICAL/SKELETAL:	
ICE PACK: Place ice bag at bedside, remove old ice bag and replace with new ice bag, secure ice bag in place; then remove equipment from area.	.5
EXTREMITY ELEVATION: Place equipment at bedside, elevate extremity through use of pillows, bed adjustments and/or sling attachments.	.5
CAST CARE: Upon arrival at the bedside, assess for pain, swelling, numbness, tingling, coldness & bluish discoloration of the skin. Evaluate the patient's ability to move the part, and then assess the temperature of the cast and the skin area around the cast.	.5
CIRCULATION CHECK: Upon arrival at bedside check extremity for swelling, numbness, and tingling, evaluate temperature and color of the skin, and then assess the patient's ability to move the part.	.5
SEIZURE CARE: Upon arrival in the patient's area, place padded tongue blade in position, and support patient during the seizure.	1
UROLOGICAL/GYNECOLOGICAL:	
CATHETERIZATION - FOLEY: Place equipment at bedside, prepare patient and insert Foley Catheter, inflate balloon, tape catheter in position, connect to urinary drainage bag; then remove used equipment from area.	2
CATHETERIZATION - STRAIGHT: Place equipment at bedside, prepare patient and insert catheter, empty bladder and remove straight catheter; then remove used equipment from area.	1
FOLEY CATHETER CARE: Place equipment at bedside, cleanse area around catheter, apply ointment, and then remove used equipment from area.	1
FOLEY CATHETER REMOVAL: Place equipment at bedside, expose catheter and drainage system, deflate Foley balloon and remove Foley catheter. Measure urine and record on I&O record; then remove used equipment from area.	1

UROLOGICAL/GYNECOLOGICAL CONT:	SCORE
CONDOM CATHETER APPLICATION: Upon arrival at bedside, apply condom catheter, connect to a urinary drainage bag; then depart the area.	1
PERINEAL CARE: Place equipment at bedside, prepare and cleanse perineal area (use bedpan with treatment solution/or bathe area); then remove equipment from area.	.5
DOUCHE: Place equipment at bedside, position patient on bedpan, administer douching solution, remove bedpan from under patient; then remove equipment from area.	.5
VAGINAL/PELVIC EXAMINATION : Assist patient onto examination table, position patient, set-up equipment and assist physician with the procedure; then assist patient in getting off the examination table.	1
DIAGNOSTIC TEST:	
GUAIAC TESTING - FECES/VOMITUS/GI DRAINAGE: Upon obtaining sample, test sample for guaiac, record results, and then remove from area.	.5
COLLECTION OF FECES SAMPLE: Upon obtaining a feces sample, place sample in collection container, label, and then remove from area.	.5
PATIENT TEACHING:	
TEACHING - URINE TESTING: Place equipment at bedside, provide instructions on the purpose, and technique for the urine testing.	.5
TEACHING - BLOW BOTTLES/INCENTIVE SPIROMETER: Place equipment at bedside, instruct patient on the purpose and use of equipment.	1
TEACHING - DRESSING CHANGE: Upon arrival at bedside, provide instruction on technique of dressing change, skin care and how to recognize abnormal conditions related to disease/injury.	1
TEACHING - INSULIN ADMINISTRATION: Upon arrival at bedside, provide information on dosage, types of insulin, syringe utilization technique, care of equipment, rotation of sites, and specific drug related information.	2
TEACHING - DIABETIC: Upon arrival at bedside, provide information on the disease process and care related to this process. (Signs and symptoms on insulin lack/overdosage, foot care, rotation of injection sites, exercise program, storage of medication, and maintenance of equipment.)	2

APPENDIX D

Psychiatric Patient Classification Tabulation Form

Psychiatric Patient Classification Tabulation Form

CATEGORY SUMMARY BLOCK

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 23	<1 - 1	1	
24 - 47	2 - 3	2	
48 - 95	4 - 7	3	
96 - 143	8 - 11	4	
144 - 288	12 - 24	5	

Nursing Unit _____

Date _____

Rater's Signature _____

Patient Care Indicators Scores

Bed No.	Age	Name of Patient	Psychiatric	Psychological	Neurological	Medication	Nutrition	Vital Signs/ Assessment	Patient Teaching	Diagnostic Test	Hygiene	Elimination	Mobility/ Exercise	Other/ Therapeutic Activities/ Modalities	Total PCIS Score	Category of Care

AHS Form 091-6 (Test)
•6 October 1983

D-1

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sychiatric

Patient Care Indicators Scores

Bed No.	Age	Name of Patient	Psychiatric	Psychological	Neurological	Medication	Nutrition	Vital Signs/ Assessment	Patient Teaching	Diagnostic Test	Hygiene	Elimination	Mobility/ Exercise	Other/ Therapeutic Activities/ Modalities	Total PCIS Score	Category of Care

APPENDIX E

Methodology for Determining Care Provider Mix for Psychiatry

NURSING CARE HOUR STANDARDS
METHODOLOGY FOR DETERMINING CARE PROVIDER MIX
PSYCHIATRIC

A. The Percentage Table for Care Provider Mix is a product of Phase II of the Nursing Care Hour Standards Study. During this phase the study team obtained 37,000 on-site measurements at nine medical treatment facilities. These data results were utilized in the development of the personnel percentage table. This percentage table is designed only for use with the Psychiatric Patient Classification Tabulation Form.

B. To compute the number of hours of care by provider groups the following steps must be completed.

1. To determine total hours for each patient care indicator complete the next 3 steps.

a. Using the scores from the Psychiatric Patient Classification Tabulation Form (AHS-091-6 Test), add the PCISs down the patient care indicator column. The total gives the total PCIS for that patient care indicator.

b. Multiply that total PCIS for the column by 5 to obtain total minutes for the patient care indicator column.

c. Divide the total minutes for each patient care indicator column by 60 to find total hours for each patient care indicator.

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 23	<1 - 1	1	
24 - 47	2 - 3	2	5
48 - 95	4 - 7	3	1
96 - 143	8 - 11	4	1
144 - 288	12 - 24	5	3

Nursing Unit: Psychiatric
Date: 0700 5 NOV - 0700 6 NOV
Rater's Signature: MAJ SMART

Bed No.	Age	Name of Patient	Psychiatric	Psychological	Neurological	Medication	Nutrition	Vital Signs/ Assessment	Patient Teaching	Diagnostic Test	Hygiene	Elimination	Mobility/ Exercise	Other/ Therapeutic Activities/ Modalities	Total PCIS Score	Category of Care
			Patient Care Indicators Scores													
1	19	Patient 1	190.0	12.0	5.0	1.0	0	1.0	4.0	1.5	0	0	4.0	0	218.5	5
2	20	Patient 2	197.0	11.0	5.0	1.0	0	1.0	4.0	1.5	0	0	4.0	0	224.5	5
3	21	Patient 3	34.0	2.0	1.0	1.0	0	0	2.0	0	0	0	0	0	40.0	2
4	19	Patient 4	28.0	2.0	1.0	0.5	0	0	1.0	0	0	0	0	0	32.5	2
5	30	Patient 5	130.0	6.0	1.0	0.5	0	0	2.0	0	0	0	0	0	139.5	4
6	29	Patient 6	167.0	6.0	2.0	1.0	0	0	2.0	0	0	0	0	0	178.0	5
7	21	Patient 7	28.0	2.0	2.5	0.5	0	0	1.0	0	0	0	0	0	34.0	2
8	19	Patient 8	66.5	8.0	2.5	0	0	0	2.0	0	0	0	0	0	79.0	3
9	25	Patient 9	34.0	4.0	1.5	0.5	0	0	1.0	0	0	0	0	0	41.0	2
10	20	Patient 10	24.0	2.0	1.0	1.0	0	0	1.0	0	0	0	0	0	31.0	2
		TOTAL POINTS	900.5	55.0	22.5	7.0	0	2.0	20.0	3.0	0	0	8.0	0	1018.0	
		TOTAL MINUTES	4502.5	275.0	112.5	35.0	0	10.0	100.0	15.0	0	0	40.0	0	5090.0	
		TOTAL HOURS	75.05	4.59	1.88	.59	0	.17	1.67	.25	0	0	.67	0	84.84	

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6 October 1980

EXAMPLE: Patient Care Indicator - Psychiatric
a. Add column down for total points = 900.5 points
b. Multiply total points by 5 - 900.5 x 5 = 4502.5 minutes
c. Divide total minutes by 60 - 4502.5 ÷ 60 = 75.05 hours

2. To determine hours of care provided by each provider group utilize the total hour score from patient care indicator located on the Psychiatric Patient Classification Tabulation Form (AHS-091-6 Test) and the Psychiatric Percentage Table for Care Provider Mix which follows:

PERCENTAGE TABLE FOR CARE PROVIDER MIX

PSYCHIATRIC

	PROFESSIONAL	TECHNICAL	PARAPROFESSIONAL
PSYCHIATRIC	19	60	21
PSYCHOLOGICAL	53	33	14
NEUROLOGICAL	73	24	3
MEDICATION	90	8	2
NUTRITION	20	57	23
VITAL SIGNS/ ASSESSMENT	25	48	27
PATIENT TEACHING	83	10	7
DIAGNOSTIC TEST	47	40	13
HYGIENE	22	64	24
ELIMINATION	31	51	18
MOBILITY/ EXERCISE	31	49	20
OTHER THERAPEUTIC ACTIVITIES/ MODALITIES	47	38	15

Professional =

Registered Professional Nurses (ANC and DAC 7-13)

Technical =

Licensed Vocational/ Technical Nurses (DAC 5-6, 91C10-40, 91F10-40, and 91B40)

Paraprofessional =

Nursing Assistants (DAC 3-4 and 91B10-30)

a. Select the total hour score for each patient care indicator.

b. Select the personnel percentage score for each patient care indicator.

c. Multiply the total hour score for each patient care indicator by the appropriate percentage score.

EXAMPLE: Patient Care Indicator - Psychiatric

a. Total Hour Score = 75.05
b. Personnel percentage score for patient care indicator =
   Professional 19%
   Technical 60%
   Paraprofessional 21%
c. Multiply total score for PCIS by personnel percentage score =
   19% x 75.05 = 14.26 hours by professionals
   60% x 75.05 = 45.03 hours by technicians
   21% x 75.05 = 15.76 hours by paraprofessionals

3. To determine total hours of direct care provided by each provider group the following steps must be completed.

a. Add the rows <u>across</u> for the total hours by provider group. This will provide you the total number of hours of direct care by each provider group.

	Psychiatric	Psychological	Neurological	Medication	Nutrition	Vital Signs/ Assessment	Patient Teaching	Diagnostic Test	Hygiene	Elimination	Mobility/ Exercise	Other/ Therapeutic Activities/ Modalities	
TOTAL HOURS	75.05	4.59	1.88	.59	0	.17	1.67	.25	0	0	.67	0	
PROFESSIONAL	14.26	2.43	1.37	.53	0	.04	1.39	.12	0	0	.21	0	= 20.35
TECHNICAL	45.03	1.52	.45	.05	0	.08	.16	.10	0	0	.33	0	= 47.72
PARAPROFESSIONAL	15.76	.64	.06	.01	0	.05	.12	.03	0	0	.13	0	= 16.80

EXAMPLE:

<u>Professional</u>

14.26 + 2.43 + 1.37 + .53 + .04 + 1.39 + .12 + .21 = 20.35
TOTAL HOURS BY PROVIDER GROUP

<u>Technical</u>

45.03 + 1.52 + .45 + .05 + .08 + .16 + .10 + .33 = 47.72
TOTAL HOURS BY PROVIDER GROUP

<u>Paraprofessional</u>

15.76 + .64 + .06 + .01 + .05 + .12 + .03 + .13 = 16.80
TOTAL HOURS BY PROVIDER GROUP

b. Divide the total hours for each provider group by 8 (hours/shift) to obtain number and mix of care providers required for direct care activities.

EXAMPLE:

20.35 ÷ 8 = 2.55 Professional mandays of direct care
47.72 ÷ 8 = 5.97 Technical mandays of direct care
16.80 ÷ 8 = 2.10 Paraprofessional mandays of direct care

4. The investigator recommends that quarterly computations of provider mix will be sufficient.

HCSD Report #81-009 (Part VI)

Nursing Care Hour Standards Study: Part VI
Neonatal Patient Classification Subsystem

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Final Report

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NEONATAL PATIENT CLASSIFICATION SUBSYSTEM

A. INTRODUCTION

Part VI Neonatal Patient Classification Subsystem addresses the development and testing of a multidimensional factor-evaulation designed patient classification subsystem for the neonatal clinical service. If nursing managers are to make sound administrative decisions on neonatal staffing needs, they must measure the appropriate nursing care activities and use the best measuring tool available. The best tool would be an acceptable reference standard, namely, the number of hours of nursing care required to meet safe essential patient care needs with the proper mix by skill level of care providers. The present study has attempted to develop and provide such a tool for the neonatal clinical service. The approach undertaken also considered the fact that time accountability is the principle commodity in accounting for human resource utilization.

B. OBJECTIVES

The two objectives for Part VI Neonatal Patient Classification Subsystem were:

1. To develop a factor-evaluation designed patient classification subsystem for the neonatal clinical service which would provide a better staffing mix based on quantified direct nursing care requirements.

2. To determine if the Neonatal Patient Classification Subsystem demonstrates validity and reliability.

C. NEONATAL PATIENT CLASSIFICATION SUBSYSTEM

The format and factor-evaluation design of the Neonatal Patient Classification Subsystem was devised to enable professional nurses in its use to ascertain direct nursing care requirements for inpatients. The Neonatal Patient Classification Subsystem was designed with five components: (1) patient classification instrument mathematical model; (2) patient classification instrument; (3) patient classification instrument instructional information; (4) patient classification tabulation form; and (5) methodology for determining care provider mix. The methodology for the development of each component will be discussed.

1. Neonatal Patient Classification Instrument Mathematical Model.

The neonatal patient classification instrument mathematical model (Appendix A) was designed for an automated or manual system. The design of the model delineates the direct nursing care activities, frequency rate for a 24-hour time frame, minimal essential mean tasking time, and the appropriate weighted score. The organization of the mathematical model displays all dimensions of direct patient care and all direct nursing care activities within each dimension labeled as patient care indicator. Since the primary purpose of the Neonatal Patient Classification Subsystem was to determine the need for direct nursing care resources, then the patient care indicators must represent those direct nursing care activities that have the greatest impact on nursing time. The neonatal patient classification instrument mathematical model was developed by utilizing those patient care indicators which were ascertained through

timing and observational studies. The neonatal patient classification instrument mathematical model was designed with the following patient care indicators:

a. Hygiene

b. Nutrition/Elimination

c. Mobility/Exercise/Safety

d. Psychological/Family Teaching

e. Vital Signs/Assessment/Diagnostic Tests

f. Gastrointestinal

g. Respiratory

h. Cardiovascular/Temperature Regulation

i. Skin

j. EENT

k. Urological

l. Medication

The number and scope of the patient care indicators included within this mathematical model are unique to the Age Group I (less than one year through two years). It must be understood that the direct nursing care activities, frequency rate for a 24-hour time frame, minimal essential mean tasking time, and appropriate weighted score apply only to the Pediatric Age Group I.

The weighted score for each direct nursing care activity was determined by selecting the best common denominator to fit the total number of direct nursing care activities included within the mathematical model. The weighted factor scale which follows was utilized in developing the neonatal patient classification instrument mathematical model: three minutes equals one point; two to three minutes equals one point; and less than two minutes equals 0.5 point. This point conversion scale allows for simple arithmetic summing to quantify the hours of direct nursing care required for neonatal inpatients, and even if all of the direct nursing care activities were required for a neonatal patient the error rate would not exceed plus or minus thirty minutes.

The neonatal patient classification instrument mathematical model provides for the quantification of the neonatal patient care requirements in the newborn nursery, intermediate intensive care and neonatal intensive care.

2. Neonatal Patient Classification Instrument.

The neonatal patient classification instrument (Appendix B) was designed for factor evaluation. Extensive comparative analyses were conducted for the determination of the patient care indicators which were considered to represent those direct nursing care activities that have the greatest impact on nursing care time. Based upon these findings thirteen patient care indicators were incorporated

within the factor-evaluation designed instrument. Therefore, this type of design allows for the identification of direct nursing care activities for each patient care indicator.

The neonatal patient classification instrument was designed to provide a simple tool in which the professional nurse needs only to rate those direct nursing care activities which are appropriate for the patient being rated. The direct nursing care activities scored on the instrument must have been performed by nursing personnel or assistance provided to other staff members performing the activity. If the patient performs self-care activities, then only those direct nursing care activities performed by nursing personnel are scored. The system was designed so that each patient needs only one rating for each 24-hour rating period. The ratings are completed at the end of the 24-hour rating period and are reflective of the preceding 24-hour time frame. The normal rating period was 0700 to 0700 hours; however, patients who were hospitalized less than 24 hours were also rated. In those patients who were within the system less than 24 hours, the ratings were reflective of the time period that the patient was present within the hospital system.

The instrument was designed to allow for the actual rating of each patient to be accomplished by selecting the frequency rate for each direct nursing care activity that was required during the rating period. Therefore, rating of the patient on the neonatal patient classification instrument was accomplished by selecting the frequency rate for the required direct nursing care activity from the options provided on the instrument. Moreover, the instrument was designed so that the frequency rate for each direct nursing care activity has a corresponding point value labeled as weighted score. The format for the neonatal patient classification instrument follows the same format as the neonatal patient classification instrument mathematical model. As was presented earlier, the patient care indicators were identified as those groupings of direct nursing care activities which most influence the total patient care requirements. Based upon the design of the neonatal patient classification instrument it is the total points within each patient care indicator that determines the patient care indicator score (PCIS). The sum of the patient care indicator scores determines the total points, hours of care and category of care for the rated patient.

The neonatal patient classification instrument was developed with the following classification scheme as displayed in Table 1.

Table 1

Neonatal Patient Classification Scheme

Total Points	Hours of Care	Category of Care
1 - 39	< 1 thru 1	1
40 - 79	2 thru 3	2
80 - 159	4 thru 7	3
160 - 239	8 thru 11	4
240 - 499	12 thru 24	5

A unique feature considered in the development of the instrument is the option of including infrequently occurring direct nursing care activities which impact significantly on nursing workload, and can be included in the rating under "other therapeutic activities/modalities."

The neonatal patient classification instrument was designed to allow for collection of demographic information. The keypunch spaces one through twelve were provided for data collection which best meets the requirements of the medical treatment facility.

3. Neonatal Patient Classification Instrument Instructional Information.

The neonatal patient classification instrument instructional information component (Appendix C) was developed to provide adequate information for the user to consistently apply the same methodology for rating patients' direct care requirements. The organization of the operational definition and weighted score for each direct nursing care activity follows the same format as the neonatal patient classification instrument mathematical model and the neonatal patient classification instrument. To reduce the redundancy of the operational definition provided, each direct nursing care activity also includes: (a) identify and screen the patient; (b) explain the procedure to the patient; (c) raise, lower or adjust the bed before and after the nursing activity; and (d) clean and straighten area.

In utilizing the neonatal patient classification instrument instructional information component the score for each direct nursing care activity applies only to the Neonatal Patient Classification *Subsystem* for which it was designed. The neonatal patient classification instrument instructional information component contains the listing of those infrequently occurring direct nursing care activities which impact significantly on nursing workload, and each of those direct nursing care activities are included in the rating under "other therapeutic activities/ modalities." This list of direct nursing care activities is not all-inclusive, as the frequency with which some direct nursing care activities occurred was not sufficient to permit an accurate analysis or generation of a valid score. Moreover, in rating the patients' direct nursing care requirements, only those activities provided are to be utilized for rating the direct care requirements.

4. Neonatal Patient Classification Tabulation Form.

The neonatal patient classification tabulation form (Appendix D) was designed for the recording of summary data. After the assessment of direct nursing care requirements has been completed by the professional nurse, the unit clerk can use the neonatal patient classification tabulation form to record the patient care indicator scores for each patient. The instructions for recording of patient data are located within the neonatal patient classification instrument instructional information component. The data accumulated to this point will provide the necessary information for determining category of care and the hours of care within each patient care indicator for the clinical unit.

The results from extensive data analyses were utilized to design the neonatal patient classification tabulation form. These analyses demonstrated that distribution of hours of care within each patient care indicator and not the category of care determines the mix by skill level of care providers required to meet the rated direct nursing care requirements for neonatal inpatients. It must be emphasized that both category of care and hours of care within each patient

care indicator can determine man-hour requirements, but only the hours of care within each patient care indicator can determine the best mix by skill level of care providers.

Since all medical treatment facilities do not have automated systems readily available, the neonatal patient classification tabulation form was designed to allow for manual computations as well as keypunching of the patient care indicator scores. Lastly, the neonatal patient classification tabulation form was designed with the same format as the neonatal patient classification instrument mathematical model, neonatal patient classification instrument, and neonatal patient classification instrument instructional information components.

5. Methodology for Determining Care Provider Mix for Neonatal.

The methodology for determining care provider mix for neonatal (Appendix E) was developed for the purpose of providing the best mix by skill level of care providers. The diversity of direct nursing care activities requires a more complex mix of personnel; therefore, more sophisticated techniques are required to meet these demands. During the timing and observation studies the observers recorded the number and skill level of care providers for each direct nursing care activity. These data were utilized to establish personnel mix percentage scores for each direct nursing care activity. These personnel mix percentage scores were utilized in the development of the personnel percentage table for care provider mix for neonatal patients. The percentage table for provider mix for neonatal was developed by collapsing the personnel percentage scores for each direct nursing care activity within each patient care indicator. Table 2 displays the percentage table for care provider mix for neonatal.

The mix by skill level of care providers can easily be determined by utilizing the summary data from the neonatal patient classification tabulation form and the percentage table for care provider mix for neonatal. This approach differs significantly from previous patient classification systems which match category of care with mix of personnel. Present findings demonstrate that the hours of care within each patient care indicator was the determinant for the mix by skill level of care providers and not the category of care. It must be noted that patient classification systems that match category of care with mix of personnel make the major assumption that all patients in the same category of care have the same direct nursing care requirements; hence, the same mix of personnel can meet those care requirements. However, the present findings do not support this assumption.

It is important to note that the percentage table for care provider mix for neonatal was developed specifically for the neonatal clinical service and is not generalizable to other inpatient clinical services. Moreover, the percentage table for care provider mix for neonatal applies only to the neonatal patient.

Table 2

Percentage Table for Care Provider Mix for Neonatal

	Professional	Technical	Paraprofessional
Hygiene	52	36	12
Nutrition/ Elimination	60	29	11
Mobility/ Safety/ Exercise	61	31	8
Psychological/ Family Teaching	64	28	8
Vital Signs/ Assessment/ Diagnostic Test	65	26	9
Gastrointestinal	84	15	1
Respiratory	78	19	3
Cardiovascular/ Temperature Regulation	86	11	3
Skin	60	26	14
EENT	79	17	4
Urological	64	24	12
Medication	84	15	1
Other Therapeutic Activities/ Modalities	49	40	11

D. DATA COLLECTION AND DATA COLLECTION

1. Validity Determination.

Validity studies were conducted to determine if the Neonatal Patient Classification Subsystem demonstrated content-related and criterion-related validity. Professional nursing judgment was involved in the original design of the neonatal patient classification instrument and was again required for validation of the content of the instrument. It is of importance to note that during all data collection efforts the participants had the option of and were encouraged to indicate inadequacies in the Neonatal Patient Classification Subsystem and suggest modifications.

Having completed the content-related validity testing, correlation coefficients were computed to determine the relationship of documented direct nursing care requirements with the neonatal patient classification instrument.

Correlation coefficients for documented direct nursing care requirements with the neonatal patient classification instrument mathematical model for two independent testings are displayed in Table 3.

Table 3

Validity: Correlation Coefficients for Document Direct Nursing Care Requirements with the Neonatal Patient Classification Instrument Mathematical Model

Neonatal	Correlation Coefficients	
	Test 1	Test 2
Direct Nursing Care Requirements Mathematical Model	.99	.99

Observational studies were conducted to determine the relationship of the neonatal patient classification instrument to the actual observed and timed measurements of direct nursing care activities. The criterion-related validity coefficients for neonatal are displayed in Table 4.

Timed measurements refer to the actual measurement by stopwatch; observed frequencies refer to actual observed frequency rates for each direct nursing care activity; and hours of care were established utilizing the appropriate minimal essential mean tasking time. Assessed requirements refer to the total hours of care established through consensus nursing judgement. As shown in Table 4 the criterion-related validity coefficients for neonatal ranged from $r = .87$ to $r = .99$.

Table 4

Criterion-Related Validity Coefficients for Timed Measurements, Observed Frequencies and Assessed Requirements

	24-Hour Study Period			
Hours of Direct Nursing Care	Mean	SD	95% CI	Pearson's r
Timed Measurements	4.54	3.01	2.99-6.09	.87
Observed Frequencies	4.39	3.44	2.63-6.16	
Timed Measurements	4.56	3.01	3.02-6.11	.99
Assessed Requirements	4.63	3.57	2.80-6.47	
Observed Frequencies	4.39	3.44	2.63-6.16	.99
Assessed Requirements	4.63	3.57	2.80-6.47	

2. Reliability Determination.

Reliability studies were conducted to determine: (a) if the neonatal patient classification instrument demonstrated statistically significant interrater reliability for inpatient classification; and (b) if the individual patient care indicators displayed internal consistency.

Prior to initiation of the interrater reliability studies, the professional nurse raters received an orientation to and standardized instructions about the instruments used in the study. A two-hour orientation period was held for group presentation, followed by individual orientation by the project officer. The raters were given a minimum of ten days in which to practice rating patients using the Neonatal Patient Classification Subsystems.

A schedule of data collection for the neonatal units was devised to allow for rating of patients on two preselected days per week. The study was conducted over an eight-week period with sixteen data collection days. The time-span schedule, commencing in September 1980 and ending in January 1981, required four months to complete. The data collection periods were staggered to allow for the project officer to initiate the study within the four medical treatment facilities as follows: William Beaumont Army Medical Center; Eisenhower Army Medical Center; Darnall US Army Community Hospital, Fort Hood; and Womack US Army Community Hospital, Fort Bragg.

Sixteen data collections were conducted within the four medical treatment facilities. Ratings were completed on the entire inpatient population of all neonatal units. Each of the 943 inpatients were rated by independent, trained pairs of professional nurse raters. In order to establish a level of quality control for the data collection efforts at the unit level, the forms were collected by a facility project officer. The facility project officer was responsible for checking the instruments for completeness, legibility, reconstruction of any missing data and pairing the match pairs of data from the two professional nurse raters. At the end of each week, the facility project officer mailed the completed instruments to HCSD using the preaddressed envelopes provided by HCSD. The HCSD staff edited each instrument and recomputed all scores to assure accuracy prior to coding of data for keypunching.

The population consisted of 503 males and 440 females within the Pediatric Age Group I which covers the ages of less than one through two years of age. A description of the patient population is presented in order to provide a framework for the analyses of the study results. The breakdown of category of care by sex of the patients for rater one vs rater two are shown in Table 5.

Table 5

Category of Care by Sex of the Patient for Rater One vs Rater Two

Category of Care		Sex of Patient: Male	Sex of Patient: Female
1	Rater One	74	86
	Rater Two	80	89
2	Rater One	127	186
	Rater Two	140	143
3	Rater One	277	197
	Rater Two	258	189
4	Rater One	24	21
	Rater Two	20	18
5	Rater One	1	0
	Rater Two	5	1
	N	503	440

The descriptive data of the patient care indicator scores for rater one vs rater two by sex of the total population are shown in Table 6.

Table 6

Descriptive Data of Patient Care Indicator Scores
for Rater One vs Rater Two by Sex

		Mean	SD	N
Male	Rater One	89.29	47.69	503
	Rater Two	87.78	48.81	
Female	Rater One	81.78	44.88	440
	Rater Two	79.86	42.57	

Category of care distribution by days of the week for rater one vs rater two are shown in Table 7.

Table 7

Category of Care by Days of the Week for Rater One vs Rater Two
N = 943

Category of Care		Days of Week: Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	Rater One	38	17	22	12	24	21	26
	Rater Two	35	20	22	13	26	21	32
2	Rater One	25	50	43	22	40	46	37
	Rater Two	37	53	41	27	36	45	44
3	Rater One	37	78	95	59	52	49	54
	Rater Two	77	77	96	52	57	43	40
4	Rater One	6	10	7	3	14	5	0
	Rater Two	6	4	8	3	10	6	1
5	Rater One	0	0	0	0	0	1	0
	Rater Two	1	1	0	1	1	2	0

In the determination of interrater reliability two sets of ratings, one for total score and one for category of care, were obtained from the assessment of each of the 943 inpatients by two independent trained raters representing four medical treatment facilities. These data were analyzed using the Pearson's correlation coefficient with a resultant reliability coefficient for total score and category of care. Table 8 displays the neonatal patient classification instrument frequency distribution: rater one vs rater two for category of care. Pearson's correlation coefficient for category of care rater one vs rater two, $r = .87$.

Table 8

Neonatal Patient Classification Instrument
Frequency Distribution: Rater One vs Rater Two for Category of Care

N = 943

Category of Care for Rater One	Category of Care for Rater Two: 1	2	3	4	5
1	130	29	1	0	0
2	38	208	17	0	0
3	1	45	418	7	3
4	0	1	11	31	2
5	0	0	0	0	1

Pearson's r for category of care rater one vs rater two, r = .87.

Concurrently, Table 9 displays the correlation coefficients for total patient care indicator score (PCIS) by category of care. Pearson's correlation coefficient for total PCIS rater one vs rater two across categories, r = .91. In addition, all coefficients for total score and category of care were significant ($p < .001$).

Table 9

Neonatal Patient Classification Instrument
Total Patient Care Indicator Score (PCIS) by Category of Care

		PCIS	Mean	SD	95% CI	N
1	Rater One	1-39	27.11	3.09	25.85-28.37	160
	Rater Two		27.79	8.10	26.54-29.03	169
2	Rater One	40-79	57.50	11.69	56.09-58.91	268
	Rater Two		58.91	12.28	75.47-60.34	283
3	Rater One	80-159	109.87	19.26	108.19-111.61	474
	Rater Two		109.67	19.25	107.88-111.45	447
4	Rater One	160-239	195.96	25.82	188.20-203.71	45
	Rater Two		188.49	21.85	181.30-195.67	38
5	Rater One	240-499	538.00			1
	Rater Two		290.50	136.10	147.67-433.33	6

Pearson's r for total PCIS rater one vs rater two across categories, r = .91.

To establish internal consistency of the neonatal patient classification instrument, two independent raters' patient care indicator scores were analyzed to determine if the individual responses to the various patient care indicators were consistent. Correlation coefficients were used to indicate the degree to which variation in the patient care indicator scores for rater one was related to variation in the patient care indicator scores for rater two. Correlation coefficients between rater one and rater two for patient care indicators across categories of care for a neonatal sample are shown in Table 10. Significance tests for each coefficient are reported and computed from the students t with N-2 degrees of freedom. Most of the coefficients achieved significance at the .05 level or better. All of the cells in category five contained less than three observations and therefore were not included in the analysis.

Table 10

NEONATAL PATIENT CLASSIFICATION INSTRUMENT

INTERCORRELATIONS OF PATIENT CARE INDICATOR SCORES

	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Psychological/ Family Teaching	Vital Signs /Assessment/Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	EENT	Urological	Medication	Other Therapeutic Activities/ Modalities
Category 1 (<1-1 hour) (df = .67)	r=.715 p<.001	r=.314 p<.02	r=.471 p<.001	r=.549 p<.001	r=.807 p<.001	r=.689 p<.001	r=.645 p<.001	r=.148 p n/s	r=.351 p<.01	r=.723 p<.001	r=.648 p<.001	r=.954 p<.001	No Entries
Category 2 (2-3 hours) (df = 129)	r=.549 p<.001	r=.798 p<.001	r=.288 p<.01	r=.532 p<.001	r=.775 p<.001	r=.787 p<.001	r=.728 p<.001	r=.865 p<.001	r=.641 p<.001	r=.773 p<.001	r=.713 p<.001	r=.708 p<.001	r = 1 p<.001
Category 3 (4-7 hours) (df = 216)	r=.586 p<.001	r=.683 p<.001	r=.682 p<.001	r=.643 p<.001	r=.838 p<.001	r=.689 p<.001	r=.521 p<.001	r=.902 p<.001	r=.808 p<.001	r=.715 p<.001	r=.779 p<.001	r=.683 p<.001	r = 1 p<.001
Category 4 (8-11 hours) (df = 24)	r=.029 p n/s	r=.225 p n/s	r=.627 p<.01	r=.909 p<.001	r=.608 p<.01	r=.498 p<.02	r=.877 p<.001	r=.702 p<.001	r=.651 p<.01	r=.215 p n/s	r=.631 p<.01	r=.656 p<.01	r=.999 p<.001
Category 5 (12-24 hours)	*	*	*	*	*	*	*	*	*	*	*	*	*

* Count less than 3

E. CONCLUSIONS

The Neonatal Patient Classification Subsystem has been developed and tested through four years of rigorous field research. This quantitative subsystem measures direct nursing care activities and determines the best mix by skill level of care providers for neonatal patients. The Neonatal Patient Classification Subsystem utilizes the factor-evaluation design, is multidimensional, and is designed for automated or manual implementation. Extensive validity and reliability studies demonstrate that the Neonatal Patient Classification Subsystem is valid and reliable.

APPENDIX A

Neonatal Patient Classification Instrument Mathematical Model

NEONATAL PATIENT CLASSIFICATION INSTRUMENT

MATHEMATICAL MODEL

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
HYGIENE:						
Bathing, Complete (6.2989)	(1) 6.2989 2	(2) 12.5978 4				
Bathing, Face and Hands (1.1500)	(1) 1.1500 .5	(2) 2.3000 1	(3) 3.4500 1	(6) 6.9000 2	(9) 10.3500 3	(12) 13.8000 5
Changing Bed Linen Protector/Chux (.8357)	(1) .8357 .5	(2) 1.6714 .5	(3) 2.5071 1	(6) 5.0142 2	(9) 7.5213 3	(12) 10.0284 3
Changing Shirt (1.1484)	(1) 1.1484 .5	(2) 2.2968 1	(3) 3.4452 1	(6) 6.8904 2	(9) 10.3356 3	(12) 13.7808 5
Skin Care (3.2350)	(1) 3.2350 1	(2) 6.4700 2	(3) 9.7050 3	(6) 19.4100 6	(9) 29.1150 10	(12) 38.8200 13
Oral Hygiene (2.3318)	(1) 2.3318 1	(3) 6.9954 2	(6) 14.9908 5	(9) 20.9862 7	(12) 27.9816 9	(24) 55.9632 19
Changing Linens (2.1003)	(1) 2.1003 1	(2) 4.2006 1	(3) 6.3009 2	(4) 8.4012 3	(5) 10.5015 4	(6) 12.6018 4
NUTRITION/ELIMINATION:						
Feeding - Graduated Feeder, Premature/Bottle (16.4942)	(1) 16.4942 5	(2) 32.9884 11	(3) 49.4826 16	(4) 65.9768 22	(6) 98.9652 33	(9) 148.4478 49
Special Feeding - Oral-Gastric/ Oral-Jejunostomy Tube (7.1606)	(1) 7.1606 2	(2) 14.3212 5	(3) 21.4818 7	(4) 28.6424 10	(6) 42.9636 14	(9) 64.4454 21
Special Feeding - Nasogastric (18.3633)	(1) 18.3633 6	(2) 36.7266 12	(3) 55.0899 18	(4) 73.4532 24	(6) 110.1798 36	(9) 165.2697 55
Special Feeding - Nasogastric, Continuous with Infusion Pump/Gastric Feeding Equipment (3.4679)	(1) 3.4679 1	(2) 6.9358 2	(3) 10.4037 3	(4) 13.8716 5	(6) 20.8074 7	(9) 31.2111 10
Special Feeding - Hyperalimentation, Intravenous (7.0587)	(1) 7.0587 2	(2) 14.1174 5	(3) 21.1761 7	(4) 28.2348 9		
Feeding (22.2249)	(1) 22.2249 7	(2) 44.4498 15	(3) 66.6747 22			

Assessing Gastric Residual	(1)	(3)	(6)	(9)	(12)	(24)
(1.3909)	1.3909	4.1727	9.3454	12.5181	16.6908	33.3816
	.5	1	3	4	6	11
Measuring and	(1)	(3)	(6)	(9)	(12)	(24)
Recording Intake	.6912	2.0736	4.1472	6.2208	8.2944	16.5888
(.6912)	.5	1	1	2	3	6
Measuring and Recording	(1)	(3)	(6)	(9)	(12)	(24)
Output - Urine	1.0239	3.0717	6.1434	9.2151	12.2868	24.5736
(1.0239)	.5	1	2	3	4	8
Measuring and Recording	(1)	(3)	(6)	(9)	(12)	(24)
Output - Drainage	.9743	2.9229	5.8458	8.7687	11.6916	23.3832
Bottles, All Types	.5	1	2	3	4	8
(.9743)						
Output Weight -	(1)	(3)	(6)	(9)	(12)	(24)
Diaper/Bed Linens	.6410	1.9230	3.8460	5.7690	7.6920	15.3840
(.6410)	.5	.5	1	2	3	5
Diaper Change	(1)	(3)	(6)	(9)	(12)	(24)
(1.3048)	1.3048	3.9144	7.8288	11.7432	15.6576	31.3152
	.5	1	3	4	5	10
Incontinent Care	(1)	(3)	(6)	(9)	(12)	(24)
(2.4697)	2.4697	7.4091	14.8182	22.2273	29.6364	59.2738
	1	2	5	7	10	20
MOBILITY/EXERCISE/SAFETY:						
Changing Patient's	(1)	(3)	(6)	(9)	(12)	(24)
Position in Bed	1.0853	3.2559	6.5118	9.7677	13.0236	26.0472
(1.0853)	.5	1	2	3	4	9
Adjusting Position	(1)	(3)	(6)	(9)	(12)	
of Bed	.4306	1.2918	2.5836	3.8754	5.1672	
(.4306)	.5	.5	1	1	2	
Exercise - Passive	(1)	(3)	(6)	(9)	(12)	
(3.4150)	3.4150	10.2450	20.4900	30.7350	40.9800	
	1	3	7	10	14	
Adjusting Siderail	(3)	(6)	(12)	(24)	(48)	(96)
(.2431)	.7293	1.4586	2.9176	5.8344	11.6688	23.3376
	.5	.5	1	2	4	8
Adjusting Restraint	(3)	(6)	(12)	(24)	(48)	(96)
(1.0654)	3.1962	6.3924	12.7848	25.5696	51.1392	102.2784
	1	2	4	9	17	34
PSYCHOLOGICAL/FAMILY TEACHING:						
Holding - Newborn/	(1)	(3)	(6)	(9)	(12)	(24)
Infant	8.7565	26.2695	52.5390	78.8085	105.0780	210.1560
(8.7565)	3	9	18	26	35	70
Answering Patient's	(3)	(6)	(12)	(18)	(24)	(48)
Crying	2.2878	4.5756	9.1512	13.7268	18.3024	36.6048
(.7626)	1	2	3	5	6	12

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Visiting with Patient/ Purposeful Interaction (1.5331)	(3) 4.5993 2	(6) 9.1986 3	(12) 18.3972 6	(18) 27.5958 9	(24) 36.7944 12	(48) 73.5888 25
Explanation of Procedures and Tests (1.4140)	(1) 1.4140 .5	(2) 2.8280 1	(3) 4.2420 1	(6) 8.4840 3	(9) 12.7260 4	(12) 16.9680 7
Teaching - Disease/ Condition Related (4.4452)	(1) 4.4452 1	(2) 8.8904 3	(3) 13.3356 4	(6) 26.6712 9	(9) 40.0068 13	(12) 53.3424 18
Teaching - Bottle Feeding (8.5260)	(1) 8.5260 3	(2) 17.0520 6	(3) 25.5780 9	(6) 51.1560 17		
Teaching - Breast Feeding (11.5500)	(1) 11.5500 4	(2) 23.1000 8	(3) 34.6500 12	(6) 69.3000 23		
VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS:						
Blood Pressure, Arteriosonde (1.8023)	(1) 1.8023 .5	(6) 10.8138 4	(12) 21.6276 7	(24) 43.2552 14	(48) 86.5104 29	(96) 173.0208 58
Blood Pressure, Umbilical Artery (.6506)	(3) 1.9518 .5	(6) 3.9036 1	(12) 7.8072 3	(24) 15.6144 5	(48) 31.2288 10	(96) 62.4576 21
Respirations (.8666)	(3) 2.5998 1	(6) 5.1996 2	(12) 10.3992 3	(24) 20.7984 7	(48) 41.5968 14	(96) 83.1936 28
Pulse - Apical/Pedal/ Popiteal/Femoral (1.1224)	(3) 3.3672 1	(6) 6.7344 2	(12) 13.4688 4	(24) 26.9376 9	(48) 53.8752 18	(96) 107.7504 36
Rectal/Axillary Temperature, Apical Pulse, and Respirations (2.7444)	(1) 2.7444 1	(3) 8.2332 3	(6) 16.4664 5	(9) 24.6996 8	(12) 32.9328 11	(24) 65.8656 22
Temperature - Rectal/ Axillary (1.3889)	(1) 1.3889 .5	(3) 4.1667 1	(6) 8.3334 3	(9) 12.5001 4	(12) 16.6668 6	(24) 33.3336 11
Heart Sounds Assessment (1.3159)	(1) 1.3159 .5	(3) 3.9477 1	(6) 7.8954 3	(9) 11.8431 4	(12) 15.7908 5	(24) 31.5816 11
Circulation Check (1.2047)	(3) 3.6111 1	(6) 7.2222 2	(12) 14.4444 5	(24) 28.8888 10	(48) 57.7776 19	(96) 115.5552 39

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Abdominal Girth Measurement (.9722)	(1) .9722 .5	(2) 1.9444 .5	(3) 2.9166 1	(6) 5.8332 2	(12) 11.3664 4	(24) 23.3328 8
Weight - Neonate/ Infant (1.6983)	(1) 1.6983 .5	(2) 3.3966 1				
Head Circumference Measurement (.6228)	(1) .6228 .5	(2) 1.2456 .5				
Chest Measurement (.4251)	(1) .4251 .5	(2) .8502 .5				
Body Length Measurement (.5051)	(1) .5051 .5					
Initial Newborn Assessment (2.2202)	(1) 2.2202 1					
Newborn Identification Procedure (1.2000)	(1) 1.2000 .5					
Monitor Leads Application/Exchange (1.5455)	(1) 1.5455 .5	(2) 3.0910 1	(3) 4.6365 2	(4) 6.1820 2	(5) 7.7275 3	(6) 9.2730 3
Adjusting Monitor/Connecting Leads/Reset Alarm (.9929)	(3) 2.9787 1	(6) 5.9574 2	(12) 11.9148 4	(18) 17.8722 6	(24) 23.8296 8	(48) 47.6592 16
Pupil Reflexes (.6747)	(1) .6747 .5	(3) 2.0241 1	(6) 4.0482 1	(9) 6.0723 2	(12) 8.0964 3	(24) 16.1928 5
Mental Alertness (.8825)	(1) .8825 .5	(3) 2.6475 1	(6) 5.2950 2	(9) 7.9425 3	(12) 10.5900 4	(24) 21.1800 7
Bowel Sound Assessment (1.7076)	(1) 1.7076 .5	(3) 5.1228 2	(6) 10.2456 3	(9) 15.3684 5	(12) 20.4912 7	(24) 40.9824 14
Motor/Sensory Testing (1.0160)	(1) 1.0160 .5	(3) 3.0480 1	(6) 6.0960 2	(9) 9.1440 3	(12) 12.1920 4	(24) 24.3840 8
Reflex Assessment, Newborn (2.0258)	(1) 2.0258 1	(3) 6.0774 2	(6) 12.1548 4	(9) 18.2322 6		

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Pulmonary Assessment (2.1352)	(1) 2.1352 1	(3) 6.4056 2	(6) 12.8112 4	(12) 25.6224 9	(24) 51.2448 17	(48) 102.4896 34
Urine Testing - Protein (1.0554)	(1) 1.0554 .5	(3) 3.1662 1	(6) 6.3324 2	(9) 9.4986 3	(12) 12.6648 4	(24) 25.3296 8
Urine Testing - Specific Gravity (.8959)	(1) .8959 .5	(3) 2.6877 1	(6) 5.3754 2	(9) 8.0631 3	(12) 10.7508 4	(24) 21.5016 7
Urine Testing - Sugar & Acetone (1.3319)	(1) 1.3319 .5	(3) 3.9957 1	(6) 7.9914 3	(9) 11.9871 4	(12) 15.9828 5	(24) 31.9656 11
Guaiac Testing - Feces/ Vomitus/GI Drainage (.9065)	(1) .9065 .5	(2) 1.8130 .5	(3) 2.7195 1	(6) 5.4390 2	(9) 8.1585 3	(12) 10.8780 4
Blood Sample - Dextrostick (2.4752)	(1) 2.4752 1	(2) 4.9504 2	(3) 7.4256 2	(6) 14.8512 5	(9) 22.2768 7	(12) 29.7024 10
Hematocrit (6.1220)	(1) 6.1220 2	(2) 12.2440 4	(3) 18.3660 6	(6) 36.7320 12		
Situational Observation (117.8136)	(1) 117.8136 39	(2) 235.6272 79	(3) 353.4408 118			
Lumbar Puncture (15.6628)	(1) 15.6628 5	(2) 31.3256 10				
Ventricular Tap (18.5663)	(1) 18.5663 6	(2) 37.1326 12				
Physical Examination (9.3400)	(1) 9.3400 3	(2) 18.6800 6				
GASTROINTESTINAL:						
Nasogastric/Oral-Gastric Tube - Instillation (.9689)	(1) .9689 .5	(2) 1.9378 .5	(3) 2.9067 1	(4) 3.8756 1	(5) 4.8445 2	(6) 5.8134 2
Nasogastric/Oral-Gastric Tube - Insertion (4.0964)	(1) 4.0964 1	(2) 8.1928 3	(3) 12.2892 4			

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Nasogastric/Oral-Gastric Tube - Removal (.8127)	(1) .8127 .5	(2) 1.6254 .5	(3) 2.4381 1			
Fecal Impaction Assessment (1.1800)	(1) 1.1800 .5					
RESPIRATORY:						
Oxygen Administration - Respirator/Oxyhood (.4990)	(3) 1.4970 .5	(6) 2.9940 1	(9) 4.4910 1	(12) 5.9880 2	(24) 11.9760 4	(48) 23.9520 8
Oxygen Analyzer Utilization (.7325)	(3) 2.1975 1	(6) 4.3950 1	(9) 6.5925 2	(12) 8.7900 3	(24) 17.5800 6	(48) 35.1600 12
Tracheostomy - Dressing Change (3.9747)	(1) 3.9747 1	(2) 7.9494 3	(3) 11.9241 4	(4) 15.8988 5	(5) 19.8735 7	(6) 23.8482 8
Respiratory Resuscitation (36.7680)	(1) 36.7680 12	(2) 73.5360 25	(3) 110.3040 37	(6) 220.6080 74	(9) 330.9120 110	(12) 441.2160 147
Position for X-Ray (4.9143)	(1) 4.9143 2	(2) 9.8286 3	(3) 14.7429 5			
Intubation (8.2875)	(1) 8.2875 3	(2) 16.5750 6				
Extubation (2.5567)	(1) 2.5567 1					
Chest Pulmonary Therapy - Frappage with Postural Drainage (5.8615)	(1) 5.8615 2	(3) 17.5845 6	(6) 35.1690 12	(9) 52.7535 18	(12) 70.3380 23	(24) 140.6760 47
Suctioning - Oral (1.7404)	(1) 1.7404 .5	(3) 5.2212 2	(6) 10.4424 3	(9) 15.6636 5	(12) 20.8848 7	(24) 41.7696 14
Suctioning - Tracheostomy/ Endotracheal (4.0417)	(1) 4.0417 1	(3) 12.1251 4	(6) 24.2502 8	(9) 36.3753 12	(12) 48.5004 16	(24) 97.0008 32

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Suctioning - Bulb Syringe (.7024)	(1) .7024 .5	(3) 2.1072 1	(6) 4.2144 1	(9) 6.3216 2	(12) 8.4288 3	(24) 16.8576 6
CARDIOVASCULAR/TEMPERATURE REGULATION:						
Venipuncture - Blood Sample/Blood Culture (6.8677)	(1) 6.8677 2	(2) 13.7354 5	(3) 20.6031 7	(4) 27.4708 9	(5) 34.3385 11	(6) 41.2062 14
Heelstick - Blood Sample (6.1220)	(1) 6.1220 2	(2) 12.2440 4	(3) 18.3660 6	(6) 36.7320 12	(9) 55.0980 18	(12) 73.4640 24
Intravenous/Arterial Line - Blood Sample (2.3489)	(1) 2.3489 1	(2) 4.6978 2	(3) 7.0467 2	(6) 14.0934 5	(9) 21.1401 7	(12) 28.1868 9
Arterial Puncture (6.2581)	(1) 6.2581 2	(2) 12.5162 4	(3) 18.7743 6	(6) 37.5486 13	(9) 56.3229 19	(12) 75.0972 25
Intravenous Infusion/ Scalp Vein Infusion - Initiating (15.1317)	(1) 15.1317 5	(2) 30.2634 10	(3) 45.3951 15	(6) 90.7902 30	(9) 136.1853 45	(12) 181.5804 61
Intravenous Infusion - Changing IV Bottle (1.6009)	(1) 1.6009 .5	(2) 3.2018 1	(3) 4.8027 2	(4) 6.4036 2	(5) 8.0045 3	(6) 9.6054 3
Intravenous Infusion - IV Push Medication/ Piggy-Back Medication (2.0502)	(1) 2.0502 1	(3) 6.1506 2	(6) 12.3012 4	(9) 18.4518 6	(12) 24.6024 8	(24) 49.2048 16
Intravenous Infusion - Platelets/Plasma/Blood (6.2515)	(1) 6.2515 2	(3) 18.7545 6	(6) 37.5090 13	(9) 56.2635 19	(12) 75.0180 25	
Intravenous Infusion - Flow Rate (.9078)	(6) 5.4468 2	(12) 10.8936 4	(24) 21.7872 7	(48) 43.5744 15	(72) 63.3616 21	(96) 87.1488 29
Intravenous Infusion - Infusion Pump Setup (4.7233)	(1) 4.7233 2	(2) 9.4466 3	(3) 14.1699 5	(4) 18.8932 6	(5) 23.6165 8	(6) 28.3398 9
Intravenous/Arterial Line - Termination (3.7844)	(1) 3.7844 1	(2) 7.5688 3	(3) 11.3532 4	(4) 15.1376 5	(5) 18.9220 6	(6) 22.7064 8
Intravenous Infusion - IV Catheter Care (8.4231)	(1) 8.4231 3					
Intravenous/Arterial Infusion - Umbilical Cannulation (22.1193)	(1) 22.1193 7					

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Intravenous/Arterial Infusion - Removing Umbilical Catheter (2.4200)	(1) 2.4200 1					
Cardiopulmonary Resuscitation (11.0620)	(1) 11.0620 4	(2)- 22.1240 7	(3) 33.1860 11			
Temperature Probe - Application/Exchange (.6831)	(3) 2.0493 1	(6) 4.0986 1	(9) 6.1479 2	(12) 8.1972 3	(18) 12.2958 4	(24) 16.3944 5
Radiant Warmer - Application (2.6643)	(1) 2.6643 1					
Isolette - Application (1.6233)	(1) 1.6233 .5					
Temperature Regulation - K-Pad Application (2.0900)	(1) 2.0900 1					
SKIN:						
Umbilical Cord - Care (.6740)	(1) .6740 .5	(2) 1.3480 .5	(3) 2.0220 1	(6) 4.0440 1	(9) 6.0660 2	(12) 8.0880 3
Umbilical Cord - Clamp Application/Removal (.7620)	(1) .7620 .5					
Small Dressing Change, < 4" x 8" (6.7900)	(1) 6.7900 2	(2) 13.5800 5	(3) 20.3700 7	(4) 27.1600 9	(5) 33.9500 11	(6) 40.7400 14
Hot Compress (3.0833)	(3) 9.2499 3	(6) 18.4998 6	(9) 27.7497 9	(12) 36.9996 12	(24) 73.9992 25	(48) 147.9984 49
Phototherapy Treatment - Application (1.8158)	(1) 1.8158 .5	(2) 3.6316 1	(3) 5.4474 2	(6) 10.8948 4	(9) 16.3422 5	(12) 21.7896 7
Newborn Septic Workup (6.8867)	(1) 6.8867 2					
Air Floatation/Water Mattress - Application (6.5762)	(1) 6.5762 2					
Culture - Nose/Throat/ Umbilicus/Wound (.5985)	(1) .5985 .5	(2) 1.1970 .5	(3) 1.7955 .5	(4) 2.3940 1		

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
EENT:						
Instillation of Drops - Eye/Ear/Nose (.7462)	(1) .7462 .5	(2) 1.4924 .5	(3) 2.2386 1	(4) 2.9848 1	(5) 3.7310 1	(6) 4.4772 1
Prophylactic Eye Care (.9419)	(1) .9419 .5					
UROLOGICAL:						
Urine Collection Bag - Application (1.4410)	(1) 1.4410 .5	(2) 2.8820 1	(3) 4.3230 1	(4) 5.7640 2	(5) 7.2050 2	(6) 8.6460 3
Urine Specimen - Clean Catch/Straight Catheter (3.1240)	(1) 3.1240 1	(2) 6.2480 2	(3) 9.3720 3	(4) 12.4960 4	(5) 15.6200 5	(6) 18.7440 6
Bladder Tap (2.8440)	(1) 2.8440 1					
Circumcision (20.1806)	(1) 20.1806 7					
MEDICATION:						
Oral (1.4681)	(1) 1.4681 .5	(2) 2.9362 1	(3) 4.4043 1	(4) 5.8724 2	(6) 8.8086 3	(8) 11.7448 4
Topical (.8791)	(1) .8791 .5	(2) 1.7582 .5	(3) 2.6373 1	(4) 3.5164 1	(6) 5.2746 2	(8) 7.0328 2
Intramuscular (.9180)	(1) .9180 .5	(2) 1.8360 .5	(3) 2.7540 1	(4) 3.6720 1		
Subcutaneous (1.1967)	(1) 1.1967 .5	(2) 2.3934 1	(3) 3.5901 1	(4) 4.7868 2		
Suppository, Rectal (.8891)	(1) .8891 .5	(2) 1.7782 .5				

APPENDIX B

Neonatal Patient Classification Instrument

a. Patient's Hospital Card

NEONATAL PATIENT CLASSIFICATION INSTRUMENT

TOTAL PCIS Points	WEIGHTED SCORE (Points)	CATEGORY (Circle One)
	1 - 39	1
	40 - 79	2
	80 - 159	3
	160 - 239	4
	240 - 499	5

b. Date: _____ c. Rater's Name: _____

HYGIENE

	FREQUENCY	1	2	3	6	9	12
Bathing, Complete	SCORE	2	4				
Bathing, Face and Hands		.5	1	1	2	3	5
Changing Bed Linen Protector/Chux		.5	.5	1	2	3	3
Changing Shirt		.5	1	1	2	3	5
Skin Care		1	2	3	6	10	13

	1	3	6	9	12	24
Oral Hygiene	1	2	5	7	9	19

	1	2	3	4	5	6
Changing Linens	1	1	2	3	4	4

PCIS [ ][ ][ ] . [ ]
13-15 16

NUTRITION/ELIMINATION

	FREQUENCY	1	2	3	4	6	9
	SCORE						
Feeding - Graduated Feeder, Premature/Bottle.		5	11	16	22	33	49
Special Feeding - Oral-Gastric/ Oral-Jejunostomy Tube		2	5	7	10	14	21
Special Feeding - Nasogastric		6	12	18	24	36	55
Special Feeding - Nasogastric, Continuous with Infusion Pump/Gastric Feeding Equip. .		1	2	3	5	7	10
Special Feeding - Hyperalimentation, Intravenous		2	5	7	9		
Feeding		7	15	22			

	1	3	4	9	12	24
Assessing Gastric Residual.	.5	1		4	6	11
Measuring and Recording Intake.	.5	1	1	2	3	6
Measuring and Recording Output - Urine. . . .	.5	1	2	3	4	8
Measuring and Recording Output - Drainage Bottles, All Types.	.5	1	2	3	4	8
Output Weight - Diaper/Bed Linens	.5	.5	1	2	3	5
Diaper Change	.5	1	3	4	5	10
Incontinent Care.	1	2	5	7	10	20

PCIS [ ][ ][ ] . [ ]
17-19 20

MOBILITY/EXERCISE/SAFETY

	FREQUENCY	1	3	6	9	12	24
	SCORE						
Changing Patient's Position in Bed		.5	1	2	3	4	9
Adjusting Position of Bed		.5	.5	1	1	2	
Exercise - Passive.		1	3	7	10	14	

	3	6	12	24	48	96
Adjusting Siderail.	.5	.5	1	2	4	8
Adjusting Restraint	1	2	4	9	17	34

PCIS [ ][ ][ ] . [ ]
21-23 24

PSYCHOLOGICAL/FAMILY TEACHING

	FREQUENCY	1	3	6	9	12	24
	SCORE						
Holding - Newborn/Infant.		3	9	18	26	35	70

	3	6	12	18	24	48
Answering Patient's Crying.	1	2	3	5	6	12
Visiting with Patient/Purposeful Interaction.	2	3	6	9	12	25

	1	2	3	6	9	12
Explanation of Procedures and Tests	.5	1	1	3	4	7
Teaching - Disease/Condition Related.	1	3	4	9	13	18
Teaching - Bottle Feeding	3	6	9	17		
Teaching - Breast Feeding	4	8	12	23		

PCIS [ ][ ][ ] . [ ]
25-27 28

VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS

	FREQUENCY SCORE	1	6	12	24	48	96
Blood Pressure, Arteriosonde. . . .		.5	4	7	14	29	58

	3	6	12	24	48	96
Blood Pressure, Umbilical Artery.	.5	1	3	5	10	21
Respirations.	1	2	3	7	14	28
Pulse - Apical/Pedal/Popiteal/Femoral	1	2	4	9	18	36

	1	3	6	9	12	24
Rectal/Axillary Temperature, Apical Pulse, and Respirations.	1	3	5	8	11	22
Temperature - Rectal/Axillary	.5	1	3	4	6	11
Heart Sounds Assessment	.5	1	3	4	5	11

	3	6	12	24	48	96
Circulation Check	1	2	5	10	19	39

	1	2	3	6	12	24
Abdominal Girth Measurement	.5	.5	1	2	4	8
Weight - Neonate/Infant	.5	1				
Head Circumference Measurement.	.5	.5				
Chest Measurement	.5	.5				
Body Length Measurement	.5					
Initial Newborn Assessment.	1					
Newborn Identification Procedure.	.5					

	1	2	3	4	5	6
Monitor Leads Application/Exchange.	.5	1	2	2	3	3

	3	6	12	18	24	48
Adjusting Monitor/Connecting Leads/ Reset Alarm	1	2	4	6	8	16

	1	?	6	9	12	24
Pupil Reflexes.	.5	1	1	2	3	5
Mental Alertness.	.5	1	2	3	4	7
Bowel Sound Assessment.	.5	2	3	5	7	14
Motor/Sensory Testing	.5	1	2	3	4	8
Reflexes Assessment, Newborn.	1	2	4	6		

	1	3	6	12	24	48
Pulmonary Assessment.	1	2	4	9	17	34

	1	3	6	9	12	24
Urine Testing - Protein	.5	1	2	3	4	8
Urine Testing - Specific Gravity.	.5	1	2	3	4	7
Urine Testing - Sugar & Acetone	.5	1	3	4	5	11

	1	2	3	6	9	12
Guaiac Testing - Feces/Vomitus/GI Drainage. .	.5	.5	1	2	3	4
Dextrostick	1	2	2	5	7	10
Hematocrit.	2	4	6	12		
Situational Observation	39	79	118			
Lumbar Puncture	5	10				
Ventricular Tap	6	12				
Physical Examination.	3	6				

PCIS [ ][ ][ ] . [ ]
29-31 32

GASTROINTESTINAL

	FREQUENCY	1	2	3	4	5	6
Nasogastric/Oral-Gastric Tube - Instillation	SCORE	.5	.5	1	1	2	2
Nasogastric/Oral-Gastric Tube - Insertion		1	3	4			
Nasogastric/Oral-Gastric Tube - Removal		.5	.5	1			
Fecal Impaction Assessment		.5					

PCIS [ ][ ][ ] . [ ]
33-35 36

RESPIRATORY

	FREQUENCY	3	6	9	12	24	48
Oxygen Administration	SCORE	.5	1	1	2	4	8
Oxygen Analyzer Utilization		1	1	2	3	6	12

	1	2	3	4	5	6
Tracheostomy - Dressing Change	1	3	4	5	7	8

	1	2	3	6	9	12
Respiratory Resuscitation	12	25	37	74	110	147
Position for X-Ray	2	3	5			
Intubation	3	6				
Extubation	1					

	1	3	6	9	12	24
Chest Pulmonary Therapy - Frappage with Postural Drainage	2	6	12	18	23	47

	1	3	6	9	12	24
Suctioning - Oral	.5	2	3	5	7	14
Suctioning - Tracheostomy/Endotracheal	1	4	8	12	16	32
Suctioning - Bulb Syringe	.5	1	1	2	3	6

PCIS [ ][ ][ ] . [ ]
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CARDIOVASCULAR/TEMPERATURE REGULATION

	FREQUENCY SCORE	1	2	3	4	5	6
Venipuncture - Blood Sample/ Blood Culture		2	5	7	9	11	14

	1	2	3	6	9	12
Heelstick - Blood Sample	2	4	6	12	18	24
Intravenous/Arterial Line - Blood Sample	1	2	2	5	7	9
Arterial Puncture	2	4	6	13	19	25
IV Infusion/Scalp Vein Infusion - Initiating	5	10	15	30	45	61

	1	2	3	4	5	6
IV Infusion - Changing IV Bottle	.5	1	2	2	3	3

	1	3	6	9	12	24
IV Infusion - IV Push Medication/ Piggy-Back Medication	1	2	4	6	8	16
IV Infusion - Platelets/Plasma/Blood	2	6	13	19	25	

	6	12	24	48	72	96
IV Infusion - Flow Rate	2	4	7	15	21	29

	1	2	3	4	5	6
IV Infusion - Infusion Pump Setup	2	3	5	6	8	9
Intravenous/Arterial Line - Termination	1	3	4	5	6	8
IV Infusion - IV Catheter Care	3					
Intravenous/Arterial Infusion - Umbilical Cannulation	7					
Intravenous/Arterial Infusion - Removing Umbilical Catheter	1					

	1	2	3
Cardiopulmonary Resuscitation	4	7	11

	3	6	9	12	18	24
Temperature Probe - Application/Exchange	1	1	2	3	4	5

	1
Radiant Warmer - Application	1
Isolette - Application	.5
Temperature Regulation - K-Pad Application	1

PCIS [ ][ ][ ] . [ ]
41-43 44

SKIN

	FREQUENCY SCORE	1	2	3	6	9	12
Umbilical Cord - Care		.5	.5	1	1	2	3
Umbilical Cord - Clamp Application/Removal		.5					

	1	2	3	4	5	6
Small Dressing Change, < 4" x 8"	2	5	7	9	11	14

	3	6	9	12	24	48
Hot Compress	3	6	9	12	25	49

	1	2	3	6	9	12
Phototherapy Treatment - Application	.5	1	2	4	5	7
Newborn Septic Workup	2					
Air Floatation/Water Mattress - Application	2					

	1	2	3	4
Culture - Nose/Throat/Umbilicus/Wound	.5	.5	.5	1

PCIS [ ][ ][ ] . [ ]
45-47 48

EENT

	FREQUENCY	1	2	3	4	5	6
Instillation of Drops - Eye/Ear/Nose.	SCORE	.5	.5	1	1	1	1
Prophylactic Eye Care		.5					

PCIS [ ][ ][ ] . [ ]
49-51 52

UROLOGICAL

	FREQUENCY	1	2	3	4	5	6
Urine Collection Bag - Application. .	SCORE	.5	1	1	2	2	3
Urine Specimen - Clean Catch/ Straight Catheter		1	2	3	4	5	6
Bladder Tap		1					
Circumcision.		7					

PCIS [ ][ ][ ] . [ ]
53-55 56

MEDICATION

	FREQUENCY	1	2	3	4	6	8
Oral.	SCORE	.5	1	1	2	3	4
Topical		.5	.5	1	1	2	2
Intramuscular		.5	.5	1	1		
Subcutaneous.		.5	1	1	2		
Suppository, Rectal		.5	.5				

PCIS [ ][ ][ ] . [ ]
57-59 60

Locate required nursing activity on the Neonatal Nursing Activities Tasking Document and calculate total points based on the weighted score provided. (Specify activity(s) and Total Score(s)).

THERAPEUTIC ACTIVITIES/MODALITIES (OTHER)

Nursing Activity	Frequency Rate	X	Score	=	Sub-Total
_____	____		____		____
_____	____		____		____
_____	____		____		____

PCIS [ ][ ][ ] . [ ]
61-63 64

APPENDIX C

Neonatal Patient Classification Instrument Instructional Information

NEONATAL PATIENT CLASSIFICATION INSTRUMENT

INSTRUCTIONAL INFORMATION

1. Demographic Information:

a. Stamp the Neonatal Patient Classification Instrument with the patient's Hospital Card in the space provided.

b. Record the date of the data collection period. Note that the rater completes this form at the end of the 24-hour period.

c. Record the rater's name in the appropriate blank.

d. Utilize the keypunch spaces 1 through 12 to collect data which best meets the requirements for your medical treatment facility. This demographic data could include the following:

(1) Age of Patient

(2) Sex of Patient

(3) Day of the Week

(4) SI or VSI Status

(5) Clinical Service

2. The Neonatal Patient Classification Instrument is an objective factor evaluation designed rating instrument. Extensive clinical observation combined with time and frequency studies were undertaken to identify those direct nursing care activities which most influence the total patient care requirements. These groupings of nursing activities, listed below, are considered to be Patient Care Indicators. Each nursing activity is operationally defined in the attached Tasking Document. The sum of the total points within each patient care indicator will become the Patient Care Indicator Score (PCIS).

a. Hygiene

b. Nutrition/Elimination

c. Mobility/Exercise/Safety

d. Psychological/Family Teaching

e. Vital Signs/Assessment/Diagnostic Tests

f. Gastrointestinal

g. Respiratory

h. Cardiovascular/Temperature Regulation

i. Skin

j. EENT

k. Urological

l. Medication

m. Therapeutic Activities/Modalities (Includes "Other" nursing activities)

3. The patient classification instrument is simple in that the professional nurse needs only to rate those nursing activities which are appropriate for the patient being rated. The nursing activities scored on the instrument must have been performed by nursing personnel or assistance provided to other staff members performing the activity. Each patient needs only one rating for each 24-hour period. The rating of each patient must be completed at the end of the 24-hour period and must reflect the nursing care requirements for the preceding 24 hours. The normal rating period will be 0700 to 0700 hours, however, patients who are hospitalized less than 24 hours must also be rated. The ratings of these patients must be reflective of the time period that the patient was present within the hospital system.

4. The actual rating of each patient is accomplished by selecting the frequency rate for each nursing activity that was required during the rating period. The rating of the patient on the classification instrument is then accomplished by selecting the frequency rate from the options provided on the instrument. Select the frequency rate for each nursing activity that best meets the care requirements for the patient being rated. Each frequency rate has a corresponding point value (weighted score) as denoted in the blocks below each frequency rate.

EXAMPLE:

	1	3	6	9	12	24
Oral Hygiene.	1	2	5	7	9	19

This nursing activity with a frequency of "9" will receive a score of "7". Circle the appropriate score. After circling the score for each appropriate nursing activity, sum the scores within each Patient Care Indicator. Record this point value in the space provided as indicated in the following example:

EXAMPLE:

MEDICATION

FREQUENCY	1	2	3	4	5	8
Oral. . . . . SCORE	.5	1	1	2	3	4
Topical	.5	.5	1	1	2	2
Intramuscular	.5	.5	1	1		
Subcutaneous.	.5	1	1	2		
Suppository, Rectal	.5	.5				

PCIS [ ][ ][2] . [5]
57-59 60

This Patient Care Indicator (Medication) consists of "3" oral, "1" intramuscular, and "3" topical for a total of "2.5" points.

5. If the patient requires a nursing activity that is not included on the Neonatal Patient Classification Instrument, this additional procedure should be followed:

Locate the Nursing Activity Tasking Document (pages 13 thru 16) and obtain the score (points) for that activity. This point value is for a frequency of one, therefore, you must then multiply that figure by the appropriate frequency rate.

EXAMPLE:

GASTROINTESTINAL	
COLOSTOMY - DRESSING CHANGE: Place equipment at bedside, remove soiled dressing, cleanse skin and stoma, apply clean dressing, and then remove equipment from area.	5

Should the patient require three colostomy dressing change procedures during the 24-hour period, multiply the frequency of "3" times the score of "5". Indicate the activity(s) selected and the total point value clearly on the instrument (i.e., *Colostomy - Dressing Change = 15*).

6. The total PCIS points (sum of the Patient Care Indicator Scores) determines the patient's Category of Care. Indicate the Total PCIS Points and circle the appropriate Category on page 1 of the Neonatal Patient Classification Instrument.

EXAMPLE:

TOTAL PCIS Points	WEIGHTED SCORE (Points)	CATEGORY (Circle One)
	1 - 39	1
159.5	40 - 79	2
	80 - 159	(3)
	160 - 239	4
	240 - 499	5

ROUND DOWN THE FRACTIONS: For example, anything less than "160" TOTAL PCIS Points will have the WEIGHTED SCORE of "159" and will remain Category "3".

7. The Neonatal Patient Classification-Tabulation Form was developed for the recording of the Patient Care Indicator Scores (PCISs). These scores are to be recorded on this tabulation form along with the patient's name and age.

NEONATAL PATIENT CLASSIFICATION TABULATION FORM

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 39	<1 - 1	1	
40 - 79	2 - 3	2	
80 - 159	4 - 7	3	
160 - 239	8 - 11	4	
240 - 499	12 - 24	5	

Nursing Unit _____

Date _____

Rater's Signature _____

Patient Care Indicator Scores

Bed No.	Age	Name of Patient	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/Safety	Psychological/ Family Teaching	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	EENT	Urological	Medication	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care

NEONATAL NURSING ACTIVITIES TASKING DOCUMENT

Each operational definition includes: (1) Identify and screen the patient; (2) Explain the procedure to the patient/family; (3) Raise, lower or adjust the bed before and after the nursing activity; and (4) Clean and straighten area.

HYGIENE:	SCORE
BATHING, COMPLETE: Place equipment at bedside; remove shirt and diaper, bathe face, chest, abdomen, and extremities; change water, bathe back, buttocks and perineal area; replace shirt and diaper; and remove equipment from area.	2
BATHING, FACE AND HANDS: Upon arrival at bedside, bathe face and hands, then remove used equipment from area.	.5
CHANGING BED LINEN PROTECTOR/CHUX: Upon arrival at bedside, position patient, remove soiled chux, place clean chux under patient, straighten bed; then remove used chux from area.	.5
CHANGING SHIRT: Upon arrival at bedside, change soiled shirt, position patient; then remove soiled shirt from area.	.5
SKIN CARE: Place equipment at bedside, cleanse and dry areas for special care, apply lotion, and then remove equipment from area. (Buttocks, hips, shoulders, heels.)	1
ORAL HYGIENE: Place equipment at bedside, turn patient to his/her side, cleanse gums and mouth with swabs; then remove equipment from area.	1
CHANGING LINENS, NEWBORN: Place equipment at bedside, change crib sheet, cover crib sheet with diaper, position baby, and then remove soiled linen from bedside.	1
NUTRITION/ELIMINATION:	
FEEDING - GRADUATED FEEDER, PREMATURE: Place equipment at bedside, pick up baby, wrap in blanket, hold in feeding position, feed baby, bubble baby, reposition in bed (Isolette, Incubator, etc.), and then remove equipment from area.	5
OR	
FEEDING - BOTTLE: Place equipment at bedside, pick up baby, wrap in blanket, hold in feeding position, feed baby, bubble baby, reposition in bed, and then remove equipment from bedside.	
SPECIAL FEEDING - ORAL GASTRIC TUBE: Place equipment at bedside, position baby, insert feeding tube, assess placement, check stomach for residual, instill feeding, remove feeding tube, bubble baby, position, and then remove equipment from area.	1
OR	
SPECIAL FEEDING - ORAL-JEJUNOSTOMY TUBE: Place equipment at bedside, uncoil and unclamp tube, assess placement, administer feeding; flush tube with water, clamp tube, recoil and replace tube and then remove feeding equipment from area.	
SPECIAL FEEDING - NASOGASTRIC: Place feeding at bedside, unclamp tube, assess placement of tube, administer tube feeding, flush tube with water, clamp tube, record, and then remove feeding equipment from area.	6

SCORE

SPECIAL FEEDING - NASOGASTRIC, CONTINUOUS WITH INFUSION PUMP: Place equipment at bedside; remove and/or position feeding bottle, connect to feeding tube, set up through flow rate adjuster of equipment, establish flow rate, record on Intake and Output Record; then remove equipment from area. 1

OR

SPECIAL FEEDING - NASOGASTRIC, CONTINUOUS WITH GASTRIC FEEDING EQUIPMENT: Place equipment at bedside; connect to feeding tube/nasogastric tube, adjust flow rate, record on Intake and Output Record; then remove equipment from area.

SPECIAL FEEDING - HYPERALIMENTATION, INTRAVENOUS: Determine calibration of infusion equipmnet. Place hyperalimentation fluids at bedside, exchange filter and tubing, establish scheduled flow rate, record, and then remove equipmnet from area. 2

FEEDING: Place baby food at bedside; place towel or napkin as bib; prepare the food, feed patient slowly with appropriate utensil; then remove equipment from area. 7

ASSESSING GASTRIC RESIDUAL: Place equipment at bedside, position baby, insert oral-gastric feeding tube, aspirate stomach contents, remove oral-gastric feeding tube, calculate/measure volume, record results, and then remove equipment from area. .5

MEASURING AND RECORDING INTAKE: Place calibrated cylinder/container at bedside; measure or calculate fluids and record amount on Intake and Output Record; then remove used equipment from area. .5

MEASURING AND RECORDING OUTPUT - URINE: Place calibrated cylinder at bedside; measure or calculate volume, record amount on Intake and Output Record; then remove equipment from area. .5

MEASURING AND RECORDING OUTPUT - DRAINAGE BOTTLES, ALL TYPES: Place calibrated cylinder at bedside, pour contents from drainage bottle into calibrated cylinder and/or measure or calculate volume, replace drainage bottle, record amount on Intake and Output Record, and then remove equipment from area. .5

OUTPUT WEIGHT - DIAPER/BED LINENS: Upon the completion of the procedure for diaper change/bed linen change, remove items to be weighed, weigh on weight scales, and then record results. .5

DIAPER CHANGE: Upon arrival at bedside, expose baby, remove soiled diaper, cleanse buttocks and genitalia, diaper baby, position and cover baby, and then remove equipment from area. .5

INCONTINENT CARE: Place equipment at patient's bedside, bathe buttocks, perineum and thighs; change bedding; then remove equipment and soiled linen from area. 1

MOBILITY/EXERCISE/SAFETY:

CHANGING PATIENT'S POSITION IN BED: Remove support pillows, reposition patient; apply support pillows. .5

ADJUSTING POSITION OF BED: Raise, lower or adjust position of bed. .5

EXERCISE - PASSIVE: Manually move patient's extremities through the prescribed exercise program. 1

ADJUSTING SIDERAIL: Change position of siderails, i.e., up, down or removal. .5

	SCORE
ADJUSTING RESTRAINT: Upon arrival at bedside, replace or apply restraint to upper and/or lower extremities, and then depart from area.	.5
PSYCHOLOGICAL/FAMILY TEACHING:	
HOLDING - NEWBORN/INFANT: Upon arrival at bedside, wrap baby in blanket, pick up and hold baby (may be standing or sitting during the procedure) and when completed position in bed, and cover with blanket.	3
ANSWERING PATIENT'S CRYING: Time spent in responding to patient's crying.	.5
VISITING WITH PATIENT/PURPOSEFUL INTERACTION: Time spent at patient's bedside without providing any direct physical care to patient which is not in response to patient crying.	.5
EXPLANATION OF PROCEDURES AND TESTS: Instructing family on what to expect from procedure/test, what the health care personnel will be doing during the procedure/test, and why such procedure/test is being done.	.5
TEACHING - DISEASE/CONDITION RELATED: Upon arrival at bedside, provide instruction on the nature and scope of the disease process, special care requirements, limitations and/or restrictions related to disease illness.	1
TEACHING - BOTTLE FEEDING: Provide instructions on the technique of bottle feeding; observe mother during the feeding process to assess proper technique.	3
TEACHING - BREAST FEEDING: Provide instructions on the technique of breast feeding; observe mother during the feeding process to assess proper technique.	4
VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS:	
BLOOD PRESSURE, ARTERIOSONDE: Upon arrival at bedside, apply electrode gel to cuff, position cuff around extremity, measure blood pressure, remove cuff, cleanse gel from extremity, store equipment at bedside, and then record results.	.5
BLOOD PRESSURE - UMBILICAL ARTERY: Assess placement of equipment, read and record pressure reading.	.5
RESPIRATIONS: Count respiratory rate and/or count and calculate rate, and then record.	.5
PULSE - APICAL: Place equipment at bedside, place stethoscope over apex of heart and count rate, remove stethoscope, record pulse rate, and then remove equipment from area.	.5
OR	
PULSE - PEDAL/FEMORAL/POPITEAL: Place fingers on the dorsalis pedis, femoral or popiteal artery pulse and count rate. Remove fingers from pulse area and record results.	
RECTAL/AXILLARY TEMPERATURE, APICAL PULSE, & RESPIRATIONS: Place equipment at bedside, position temperature probe. Place stethoscope over apex of heart and count rate. Count and calculate respiratory rate. Remove temperature probe or thermometer, record results of measurements; then remove equipment from area.	1

	SCORE
TEMPERATURE - RECTAL, ELECTRONIC/MERCURY: Place equipment at bedside, adjust clothing, insert temperature probe or thermometer in anus, measure temperature, remove temperature probe or thermometer, record, and then remove equipment from area.	.5
OR	
TEMPERATURE - AXILLARY, ELECTRONIC/MERCURY: Place equipment at bedside, place temperature probe or thermometer in axillary area, measure temperature, remove temperature probe or thermometer, record and then remove equipment from area.	
HEART SOUNDS ASSESSMENT: Place stethoscope at bedside, arrange shirt for visual access of chest, assess and record findings; remove stethoscope from area.	.5
CIRCULATION CHECK: Upon arrival at bedside, check extremity for swelling, evaluate temperature and color of the skin.	.5
ABDOMINAL GIRTH MEASUREMENT: Place measuring tape at bedside, expose and measure abdominal girth, record results, and then store tape measure at bedside.	.5
WEIGHT - NEONATE/INFANT: Upon arrival at bedside, remove clothing, place baby on balanced Infant Weight Scales, assess and record weight, return baby to bed, dress baby, and remove used equipment from area.	.5
HEAD CIRCUMFERENCE MEASUREMENT: Place measuring tape at bedside, measure head circumference, record results; then store tape measure at bedside.	.5
CHEST MEASUREMENT: Place measuring tape at bedside, obtain chest measurement, record results; then store tape measure at bedside.	.5
BODY LENGTH MEASUREMENT: Place measuring tape at bedside, measure body length, record results; then store tape measure at bedside.	.5
INITIAL NEWBORN ASSESSMENT: Upon arrival at bedside, assess for signs of neonatal distress, congenital anomalies and general appearance.	1
NEWBORN IDENTIFICATION PROCEDURE: Apply bracelet to lower extremity, obtain foot prints, and apply identification card to bed.	.5
MONITOR LEADS APPLICATION/EXCHANGE: Place equipment at bedside, exchange leads or apply new leads, and then remove equipment from area.	.5
ADJUSTING MONITOR/CONNECTING LEADS/RESET ALARM: Upon arrival at bedside, adjust monitor, connect leads or reset the alarm; then depart from area.	.5
PUPIL REFLEXES: Place equipment at bedside, adjust room lighting, assess pupillary reflexes with flashlight and remove equipment from area.	.5
MENTAL ALERTNESS: Upon arrival at bedside, assess level of alertness and record results.	.5
BOWEL SOUND ASSESSMENT: Upon arrival at bedside, utilize a stethoscope to assess status of bowel sounds, then remove equipment from area.	.5
MOTOR/SENSORY TESTING: Upon arrival at bedside, assess extremities for sensation awareness and muscle strength.	.5

	SCORE
REFLEX ASSESSMENT, NEWBORN: Upon arrival at bedside, assess and record the rooting, sucking, grasp, swallowing, moro, and tonic neck reflexes.	1
PULMONARY ASSESSMENT - NEWBORN: Upon arrival at bedside, assess for skin color, respiratory grunting, nasal flaring, respiratory rate, sternal retractions and apnea; then record results of assessment.	1
OR	
PULMONARY ASSESSMENT: Upon arrival initiate assessment by auscultation of the lungs and/or percussion of the chest wall over the involved areas. Assess symmetry of chest and determine if respiratory movement is abdominal or thoracic.	
URINE TESTING - PROTEIN: Upon arrival at bedside, collect urine sample, utilizing a test strip assess for protein, compare test strip against standard, read and record results; then remove used equipment from area.	.5
URINE TESTING - SPECIFIC GRAVITY: Place equipment at bedside, collect urine sample and utilizing a urometer, measure specific gravity, record results, and then remove equipment from area.	.5
URINE TESTING - SUGAR & ACETONE: Place equipment at bedside, collect urine sample, measure sugar and acetone, record results, then remove equipment from area.	.5
GUAIAC TESTING - FECES/VOMITUS/GI DRAINAGE: Upon obtaining sample, test sample for guaiac, record results, and then remove from area.	.5
BLOOD SAMPLE - DEXTROSTICK: Place equipment at bedside, expose lower extremity, cleanse area, utilizing a lancet puncture heel, obtain desired blood sample, apply pressure to puncture site, process sample for 15 seconds, read and record results; then remove equipment from area.	1
HEMATOCRIT: Upon obtaining the blood sample, process, assess and record the results.	2
SITUATIONAL OBSERVATION: Assignment of one member of the nursing team to observe and provide nursing care to the patient during the specific activity. This might include, but is not limited to, transport within or without the hospital when the patient is not stable enough to be left without nursing support.	39
LUMBAR PUNCTURE: Place equipment at bedside, assist physician with procedure, and then remove equipment from area.	5
VENTRICULAR TAP: Set up equipment, expose baby, hold and/or restrain during the procedure, assist physician as required, label specimen; then remove equipment from area.	6
PHYSICAL EXAMINATION: Prepare baby for examination by the physician, hold baby as required, and remove used equipment from area at the completion of the examination.	3
GASTROINTESTINAL:	
NASOGASTRIC TUBE - INSTILLATION: Place medication and/or normal saline at bedside, unclamp or disconnect tube, instill solution with asepto syringe, reclamp or reconnect tubing; then remove equipment from area.	.5
NASOGASTRIC TUBE - INSERTION: Place equipment at bedside, insert tube, assess for placement, tape in position, then remove equipment from area.	1

	SCORE
NASOGASTRIC TUBE - REMOVAL: Place towel around patient's neck, position patient, remove tape, clamp tube and remove tubing, and then remove equipment from area.	.5
FECAL IMPACTION ASSESSMENT: Upon arrival at bedside, position patient, assess for fecal impaction.	.5
RESPIRATORY:	
OXYGEN ADMINISTRATION - RESPIRATOR: Upon arrival at bedside assess and/or regulate oxygen and ventilator pressures, assess all tubing for patency and collection of fluids within tubing, assess fluid level in water vapor container, and then assess proper position of alarms.	.5
OR	
OXYHOOD - APPLICATION/REPLACEMENT: Place oxyhood over infant's head, position oxygen sensor equipment and position additional tubing if required.	
OXYGEN ANALYZER - UTILIZATION: Upon arrival at bedside, assess the oxygen concentration utilizing the oxygen analyzer; adjust if indicated and record results.	.5
TRACHEOSTOMY - DRESSING CHANGE: Place equipment at bedside, remove soiled dressing, cleanse skin, replace dry dressing, change tracheostomy ties as indicated, and then remove soiled equipment from area.	1
RESPIRATORY RESUSCITATION: Place equipment at bedside. Check all equipment, assist physician with insertion of endotracheal/tracheostomy tube, bag breathe as indicated, connect respirator; then remove equipment from area.	12
POSITIONING FOR X-RAY: Upon arrival at bedside, assist with positioning of x-ray film; then assist with removal of exposed film.	2
INTUBATION: Place equipment at bedside, assist physician during the intubation process, tape endotracheal tube in place and remove equipment from area.	3
EXTUBATION: Place equipment at bedside, assist physician with removal of endotracheal tube; then remove equipment from area.	1
CHEST PULMONARY THERAPY - FRAPPAGE WITH POSTURAL DRAINAGE: Upon arrival at bedside, position patient, initiate treatment by auscultation of lung fields. Perform percussion to each involved segment followed by vibration.	2
SUCTIONING - ORAL: Place equipment or set up equipment at bedside, suction oral cavity with suction catheter or oral suction tip, flush catheter before and after each aspiration, replace used equipment, and remove used equipment from area.	.5
SUCTIONING - TRACHEOSTOMY: Set up equipment, put on sterile gloves, suction and flush catheter before and after each aspiration, replace used equipment, and remove used equipment from area.	1
OR	
SUCTIONING - ENDOTRACHEAL: Set up sterile equipment at bedside, put on sterile gloves, suction through endotracheal tube, flush catheter before and after each use, bag breathe between each aspiration, remove gloves, replace used equipment, and then remove used equipment from area.	
SUCTIONING - BULB SYRINGE: Upon arrival at bedside, utilize the bulb syringe to suction the nose or mouth or both nose and mouth.	.5

SCORE

CARDIOVASCULAR/TEMPERATURE REGULATION:

VENIPUNCTURE - BLOOD SAMPLE: Place equipment at bedside. Apply tourniquet to extremity, cleanse site, perform venipuncture and withdraw blood sample, and then apply pressure to puncture site. Apply labels on blood tubes and remove equipment from area. — 2

OR

VENIPUNCTURE - BLOOD CULTURE: Place equipment at bedside, apply tourniquet to extremity, clean site, perform venipuncture and withdraw blood sample, and then apply pressure to puncture site. Apply labels on blood culture bottle and remove equipment from area.

HEELSTICK - BLOOD SAMPLE: Place equipment at bedside, expose lower extremity, cleanse area, utilizing a lancet puncture heel, obtain desired blood sample, apply pressure to puncture site, label specimen, then remove equipment from area. — 2

INTRAVENOUS/ARTERIAL LINE - BLOOD SAMPLE: Place equipment at bedside, clear system, obtain blood sample through stopcock, flush system, label samples, and then remove equipment from area. — 1

ARTERIAL PUNCTURE - BLOOD GASES: Place equipment at bedside, locate arterial puncture site, perform puncture and draw blood, and then place sample on ice. Apply pressure to puncture site; then label sample and remove equipment from area. — 2

INTRAVENOUS INFUSION - INITIATION: Place equipment at bedside, apply tourniquet to extremity, cleanse site, perform venipuncture and connect IV tubing, apply ointment and dressing, and tape securely. Calculate and regulate flow rate, record on Intake and Output Record, and remove equipment from area. — 5

OR

INTRAVENOUS INFUSION - INITIATING SCALP VEIN: Place equipment at bedside, hold and/or restrain during procedure, prep area, select site and perform venipuncture, tape into place, connect to intravenous solution, record on I&O Record; then remove equipment from area.

INTRAVENOUS INFUSION - CHANGING IV BOTTLE: Place equipment at bedside, remove used IV container and replace with new IV container, calculate and regulate flow rate, record on I&O Record, and remove equipment from area. — .5

INTRAVENOUS INFUSION - IV PUSH MEDICATION: Place equipment at bedside, select site for injection of solution utilizing existing system, administer IV solution, and remove equipment from area. — 1

OR

INTRAVENOUS INFUSION - PIGGY-BACK MEDICATION: Place equipment at bedside, select site for administration of solution utilizing existing systems, record on Intake and Output Record, and remove equipment from area.

INTRAVENOUS INFUSION - PLATELETS/PLASMA: Place equipment at bedside, connect to present intravenous system, record on I&O Record; and remove used equipment from area. — 2

OR

INTRAVENOUS INFUSION - BLOOD: Place equipment at bedside, assure correct transfusion, etc., connect to present intravenous system, record on I&O Record, and remove equipment from area.

	SCORE
INTRAVENOUS INFUSION - FLOW RATE: Upon arrival at bedside, calculate and adjust flow rate as specified.	.5
INTRAVENOUS INFUSION - INFUSION PUMP SETUP: Place equipment at bedside, set up IV tubing and adjust flow rate dial. Record on I&O Record and remove used equipment from area.	2
INTRAVENOUS OR ARTERIAL LINE - TERMINATION: Place equipment at bedside, remove dressing and terminate IV or arterial catheter/needle, apply pressure to site, and record on I&O if appropriate. Remove equipment from area.	1
INTRAVENOUS INFUSION - IV CATHETER CARE: Place equipment at bedside, remove dressing from IV catheter site, cleanse skin, apply ointment, replace dressing and then date, time and initial the dressing, change IV tubing, and remove equipment from area.	3
INTRAVENOUS/ARTERIAL INFUSION - UMBILICAL CANNULATION: Set up equipment, expose baby, hold and/or restrain during the procedure, assist physician as required, connect to transducer and/or intravenous infusion solution; then remove used equipment from area.	7
INTRAVENOUS/ARTERIAL INFUSION - REMOVING UMBILICAL CATHETER: Upon arrival at bedside, slowly remove catheter, apply pressure to prescribed area; and then remove used equipment from area.	1
CARDIOPULMONARY RESUSCIATATION: Upon arrival at bedside, perform any or all aspects of cardiopulmonary resuscitation.	4
TEMPERATURE PROBE - APPLICATION/EXCHANGE: Upon arrival at bedside, tape temperature probe to exposed skin surface (may be used with or without reflector).	.5
RADIANT WARMER - APPLICATION: Set up equipment, place baby in bed, apply temperature probe; then assess status of baby and equipment.	1
ISOLETTE - APPLICATION: Set up equipment, place baby in bed, apply temperature probe; then assess status of baby and equipment.	.5
TEMPERATURE REGULATION - K-PAD APPLICATION: Place equipment at bedside, regulate temperature of unit, while holding baby, place K-pad on bed, cover completely with blanket, place baby on K-pad, and then remove used equipment from area.	1
SKIN:	
UMBILICAL CORD - CARE: Place equipment at bedside, cleanse umbilicus with antiseptic solution, expose to air and dry; then remove equipment from area.	.5
UMBILICAL CORD - CLAMP APPLICATION/REMOVAL: Place equipment at bedside, apply or remove the umbilical cord clamp; then remove equipment from area.	.5
SMALL DRESSING CHANGE, <4"x 8": Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, and then remove equipmemt from area.	2
HOT COMPRESS: Place equipment at bedside, apply hot compress to site, and then remove equipment from area.	1

	SCORE
PHOTOTHERAPY TREATMENT - APPLICATION: Place equipment at bedside, expose baby, apply eye pads, and position phototherapy lights.	.5
NEWBORN SEPTIC WORKUP: Place equipment at bedside, obtain cultures from axilla, groin, umbilicus, rectum, stomach (gastric contents), nose, throat and eyes. Label specimens and remove used equipment from area.	2
AIR FLOATATION/ALTERNATING PRESSURE MATTRESS/WATER MATTRESS - APPLICATION: Place equipment at bedside, apply air floatation, alternating pressure mattress, or water mattress to hospital bed. Remove soiled linens/equipment from area.	2
CULTURE - NOSE: Place equipment at bedside, position patient, obtain nose culture, label culture, and remove equipment from area.	.5
OR	
CULTURE - THROAT: Place equipment at bedside, position patient, obtain throat culture, label culture, and remove equipment from area.	
OR	
CULTURE - UMBILICAL CORD: Place equipment at bedside, expose umbilical area, obtain culture; then remove equipment from area.	
OR	
CULTURE - WOUND: Place equipment at bedside, remove soiled dressing, obtain culture from site, label culture, apply new dressing, and then remove equipment from area.	
EENT:	
INSTILLATION OF DROPS - EYE: Upon arrival at bedside, position patient, instill eye drops, and then remove equipment from area.	.5
OR	
INSTILLATION OF DROPS - EAR: Upon arrival at bedside, position patient, instill ear drops, and then remove equipment from area.	
OR	
INSTILLATION OF DROPS - NOSE: Upon arrival at bedside, position patient, instill nose drops, and then remove equipment from area.	
PROPHYLACTIC EYE CARE: Place equipment at bedside, cleanse eyelids, pull lower lid down and instill prophylactic solution (silver nitrate solution 1%) into conjunctival sac; then remove equipment from area.	.5
UROLOGICAL:	
URINE COLLECTION BAG - APPLICATION: Place equipment at bedside, expose area, apply urine collection bag, and then remove equipment from area.	.5
URINE SPECIMEN - CLEAN CATCH/STRAIGHT CATHETER: Place equipment at bedside, collect specimen, label specimen, and then remove specimen from area.	1
BLADDER TAP: Place equipment at bedside, prepare baby for procedure, assist physician during the procedure, label specimen, return baby to bed, and then remove used equipment from area.	1
CIRCUMCISION: Place equipment in treatment room, secure baby in restraints, assist physician with procedure, apply dressing to surgical site, remove restraints and return baby to newborn nursery.	7

SCORE

MEDICATION:

ORAL: Upon arrival at bedside, administer the oral medication. .5

TOPICAL: Place equipment at bedside, locate and expose site for topical application of medication, apply medication, and then remove equipment from area. .5

INTRAMUSCULAR: Place equipment at bedside, locate site for injection, administer medication, and then remove equipment from area. .5

SUBCUTANEOUS: Place equipment at bedside, locate site for injection, administer medication, and then remove equipment from area. .5

SUPPOSITORY - RECTAL: Place equipment at bedside, prepare and administer suppository; then remove equipment from area. .5

OTHER NURSING ACTIVITIES WHICH MAY BE USED TO DETERMINE CATEGORY OF CARE:

HYGIENE:

TUB BATH: Upon arrival at bedside, undress patient, bathe in bath basin, position in bed; then remove equipment from area. 3

NUTRITION/ELIMINATION:

SPECIAL FEEDING - GASTROSTOMY: Place feeding at bedside, uncoil and unclamp tube, administer feeding, flush tube with water, clamp tube, recoil and replace tube, and then remove feeding equipment from area. 2

PSYCHOLOGICAL/FAMILY TEACHING:

TEACHING - MEDICATION ADMINISTRATION: Upon arrival at bedside, provide instruction on dosage, route and specific drug related information. 7

TEACHING - DIETARY EXPLANATION: Upon arrival at bedside, provide instruction on dietary requirements/restrictions. 2

TEACHING - PREOPERATIVE INSTRUCTION: Upon arrival at bedside, provide instruction on preoperative and postoperative requirements. 13

TEACHING - URINE TESTING: Place equipment at bedside, provide instructions on the purpose and technique for the urine testing. .5

TEACHING - DIAGNOSTIC TEST: Upon arrival at bedside, provide information on the purpose and requirements for the diagnostic test. .5

TEACHING - DRESSING CHANGE: Upon arrival at bedside, provide instruction on technique of dressing change, skin care and how to recognize abnormal conditions related to disease/injury. 1

TEACHING - ILEOSTOMY/ILEOCONDUIT CARE: Upon arrival at bedside, provide instructions on the purpose, equipment and care of the ileosotmy or ileoconduit. 4

	SCORE
TEACHING - COLOSTOMY CARE: Upon arrival at bedside, provide instructions on the purpose, equipment and technique of colostomy irrigation, and colostomy bag care.	3
VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS:	
BLOOD PRESSURE, MANUAL: Place equipment at bedside, place cuff around extremity, position stethoscope, measure blood pressure, remove cuff, record results; remove equipment from area.	.5
PULSE - RADIAL/BRACHIAL: Place fingers over radial or brachial pulse and count rate, remove fingers from pulse area and record results.	.5
PULSE - DOPPLER: Place equipment at bedside, place sensor over pulse area, assess and record pulse rate; then remove equipment from area.	1
RHYTHM STRIP - MONITOR: Obtain 20 second strip, record name, date and time, then file for future use.	.5
RHYTHM STRIP - ECG MACHINE: Place equipment at bedside, prepare equipment for use, apply limb leads, obtain 20 second strip, record name, date and time, remove limb leads; then remove equipment from area.	2
RHYTHM STRIP MEASUREMENTS: Upon obtaining the rhythm strip, measure P-R interval, S-T segment, and assess for arrhythmic pattern; then record results.	.5
12 LEAD ECG: Place equipment at bedside, connect leads to patient and obtain ECG. Record name, date and time on ECG. Remove leads and clean skin, then remove equipment from area.	3
MONITORING READING - BLOOD PRESSURE/HEART RATE/PULMONARY ARTERY PRESSURE/ CENTRAL VENOUS PRESSURE: Upon arrival at bedside, assess and record findings.	.5
COLLECTION OF FECES SAMPLE: Upon obtaining a feces sample, place sample in collection container, label, and then remove from area.	.5
BONE MARROW ASPIRATION: Place equipment at bedside, assist physician with procedure, and then remove equipment from area.	5
GASTROINTESTINAL:	
NASOGASTRIC TUBE - IRRIGATION: Place irrigation solution at bedside, unclamp or disconnect tube, irrigate tubing with asepto syringe, reclamp or reconnect tubing; then remove equipment from area.	1
COLOSTOMY - IRRIGATION: Place equipment at bedside, remove colostomy bag/ dressing, administer irrigation solution, allow for return of fluid and feces, cleanse skin and stoma, reapply colostomy bag/dressing, then remove equipment from area.	8
COLOSTOMY - DRESSING CHANGE: Place equipment at bedside, remove soiled dressing, cleanse skin and stoma, apply clean dressing, and then remove equipment from area.	5
ILEOSTOMY/ILEOCONDUIT - DRESSING CHANGE: Place equipment at bedside, remove ileostomy bag or dressing, cleanse skin and stoma area, replace ileostomy bag or dressing, and remove equipment from area.	3

	SCORE
RESPIRATORY:	
TRACHEOSTOMY - CLEANING CANNULA: Place or utilize equipment at bedside, complete tracheostomy suction, remove, clean and replace inner tube, and then remove soiled equipment and replace with clean equipment.	2
TRACHEOSTOMY - CHANGING TUBE: Place equipment at bedside, untie tracheostomy strings, remove and replace tracheostomy tube, cleanse skin, tie tracheostomy strings, and then remove equipment from area.	2
CHEST TUBE - INSERTION: Place all equipment at bedside, assist physician with insertion of chest tube, prepare water-sealed drainage bottles, tape all connections and drainage bottles; then remove equipment from area.	8
CHEST TUBE - CHANGING BOTTLES: Place prepared chest tube bottles at bedside, clamp chest tube, change drainage tube and bottles, secure drainage bottles and tops with tape, unclamp chest tube, and then remove used equipment from area.	7
CHEST TUBE - CARE: Set up equipment at bedside, remove dressing around chest tube, cleanse skin, replace dressing, tape securely, and then remove used equipment from area.	4
CHEST TUBE - REMOVAL: Place equipment at bedside, assist physician with removal of chest tube, apply pressure dressing; then remove equipment from area.	3
THORACENTESIS: Place equipment at bedside, obtain vital signs, assist physician and support patient during the procedure, repeat vital signs, measure and record aspiration fluids, and then remove equipment from area.	3
CARDIOVASCULAR/TEMPERATURE REGULATION:	
ARTERIAL LINE - ARTERIAL LINE SETUP: Place equipment at bedside, set up transducer tray, IV solution and cardiac monitor. Assist physician with insertion of arterial catheter. Calibrate the cardiac monitor, and measure the transducer current with a mercury sphygomomanometer. Remove equipment from area.	6
ARTERIAL LINE - INITIATION: Place equipment at bedside, assist physician with the procedure as required, connect to arterial line setup, assess status of arterial line; then remove equipment from area.	14
ARTERIAL LINE - TRANSDUCER EXCHANGE: Place equipment at bedside, set up transducer tray and IV solution, calibrate the cardiac monitor, and measure the transducer current with a mercury sphygomomanometer. Remove equipment from area.	5
SURGICAL INTRAVENOUS INITIATION, CUT DOWN: Place equipment at bedside, assist physician with the procedure as required, connect to intravenous line setup, assess status of intravenous line; then remove equipment from area.	21
INTRAVENOUS/ARTERIAL INFUSION - TRANSFUSION EXCHANGE: Set up equipment, hold and/or restrain during procedure, follow established blood transfusion procedure, assist physician as required, monitor vital signs; then remove used equipment from area.	61

SKIN:	SCORE
SUTURE/SKIN CLIP REMOVAL, < 15: Place equipment at bedside, remove dressing if required, remove sutures or skin clips, and then remove equipment from area.	2
SUTURE/SKIN CLIP REMOVAL, ≥ 15: Place equipment at bedside, remove dressing if required, remove sutures, and then remove equipment from area.	5
LARGE DRESSING CHANGE, ≥ 4"x 8": Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, remove equipment from area.	3
REINFORCING DRESSING: Place equipment at bedside, apply dressing to present dressing for reinforcement, and then remove equipment from area.	2
DECUBITUS CARE: Place or position equipment at bedside, cleanse skin, apply heat lamp and/or expose to light.	3
HEAT LAMP: Place or position lamp at bedside, expose site, and apply heat lamp.	.5
WOUND IRRIGATION: Place equipment at bedside, remove soiled dressing, irrigate and cleanse site, apply dressing and then remove equipment from area.	3
SURGICAL PREP, LOCAL: Place equipment at bedside, prepare skin for prep, shave area specified, and then remove used equipment from area.	1
ISOLATION, GOWNING & GLOVING: Upon arrival at isolation area, wash hands, put on isolation gown, mask and gloves, or when departing the isolation area, remove isolation gown, mask and gloves; then wash hands.	.5
DEATH CARE: Place equipment at bedside, prepare patient and cover with shroud.	6
EENT:	
EYE CARE: Place equipment at bedside, cleanse eyes and apply solution/ointment as prescribed. Apply eye patch and then remove equipment from area.	1
NEUROLOGICAL:	
SEIZURE CARE: Upon arrival in the patient's area support patient during the seizure.	4
UROLOGICAL:	
CATHETERIZATION - STRAIGHT: Place equipment at bedside, prepare patient and insert catheter, empty bladder and remove straight catheter; then remove used equipment from area.	4

APPENDIX D

Neonatal Patient Classification Tabulation Form

NEONATAL PATIENT CLASSIFICATION TABULATION FORM

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 39	<1 - 1	1	
40 - 79	2 - 3	2	
80 - 159	4 - 7	3	
160 - 239	8 - 11	4	
240 - 499	12 - 24	5	

Nursing Unit _____

Date _____

Rater's Signature _____

Patient Care Indicator Scores

Bed No.	Age	Name of Patient	Hygiene	Nutr .ion/ Elimination	Mobility/ Exercise/Safety	Psychological/ Family Teaching	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	EENT	Urological	Medication	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care

D-1

AUS Form 091-12 (Test)
October 1980

Neonatal Continued:

Patient Care Indicator Scores

Bed No.	Age	Name of Patient																	
																			Hygiene
																			Nutrition/ Elimination
																			Mobility/ Exercise/Safety
																			Psychological/ Family Teaching
																			Vital Signs/ Assessment/ Diagnostic Tests
																			Gastrointestinal
																			Respiratory
																			Cardiovascular/ Temperature Regulation
																			Skin
																			EENT
																			Urological
																			Medication
																			Therapeutic Activities/ Modalities (Other)
																			Total PCIS Score
																			Category of Care

APPENDIX E

Methodology for Determining Care Provider Mix for Neonatal

NURSING CARE HOUR STANDARDS
METHODOLOGY FOR DETERMINING CARE PROVIDER MIX
NEONATAL

A. The Percentage Table for Care Provider Mix is a product of Phase II of the Nursing Care Hour Standards Study. During this phase the study team obtained 37,000 on-site measurements at nine medical treatment facilities. These data results were utilized in the development of the personnel percentage table. This percentage table is designed only for use with the Neonatal Patient Classification Tabulation Form.

B. To compute the number of hours of care by provider groups the following steps must be completed.

1. To determine total hours for each patient care indicator complete the next 3 steps.

a. Using the scores from the Neonatal Patient Classification Tabulation Form (AHS 091-12 Test), add the PCISs down the patient care indicator column. The total gives the total PCIS for that patient care indicator.

b. Multiply that total PCIS for the column by 3 to obtain total minutes for the patient care indicator column.

c. Divide the total minutes for each patient care indicator column by 60 to find total hours for each patient care indicator.

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 39	<1 - 1	1	
40 - 79	2 - 3	2	
80 - 159	4 - 7	3	7
160 - 239	8 - 11	4	3
240 - 499	12 - 24	5	

NEONATAL PATIENT CLASSIFICATION TABULATION FORM

Nursing Unit: NEONATAL ICU

Date: 0700 SNDU - 0700 6NDU

Rater's Signature: MAJ SNDU

Patient Care Indicator Scores

Bed No.	Age	Name of Patient	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/Safety	Psychological/ Family Teaching	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	EENT	Urological	Medication	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care
1	01	Patient 1	10.0	74.0	4.5	22.5	21.5	0	12.0	2.0	0	0	0	0	0	146.5	3
2	01	Patient 2	6.0	60.0	4.0	17.5	31.5	0	0	8.0	2.0	0	0	0	0	129.0	3
3	01	Patient 3	12.0	17.0	7.0	5.0	66.0	0	25.0	61.0	0	0	0	2.0	0	195.0	4
4	01	Patient 4	6.0	39.5	1.5	18.5	31.0	0	0	0	0	0	0	3.0	0	99.5	3
5	01	Patient 5	5.0	58.0	3.0	17.5	19.5	0	0	0	0	0	0	0	0	103.0	3
6	01	Patient 6	4.0	41.0	3.0	27.0	54.0	0.5	1.0	4.0	0.5	0.5	0	0.5	0	136.[illegible]	3
7	01	Patient 7	9.0	74.0	3.5	23.5	28.5	0	2.0	0	0	0	0	0	0	140.5	3
8	01	Patient 8	6.0	60.5	3.0	24.5	18.0	0	13.0	4.0	0	0	0	0	0	131.0	3
9	01	Patient 9	8.0	23.0	4.5	8.5	58.0	6.0	19.0	44.0	2.0	0	0	1.0	0	174.0	4
10	01	Patient 10	4.5	24.0	9.0	4.0	52.5	5.0	19.0	48.0	2.0	0	0	1.5	0	170.5	4
		TOTAL POINTS	70.5	473.0	43.0	170.5	380.5	11.5	91.0	171.0	6.5	.5	0	8.0	0	1426.0	
		TOTAL MINUTES	211.5	1419.0	129.0	511.5	1141.5	34.5	273.0	513.0	19.5	1.5	0	24.0	0	4278.0	
		TOTAL HOURS	3.53	23.65	2.15	8.53	19.03	.58	4.55	8.55	.33	.03	0	.40	0	71.30	

AHS Form 091-12 (Test)
6 October 1980

EXAMPLE: Patient Care Indicator - Hygiene

a. Add column down for total points = 70.5 points
b. Multiply total points by 3 - 70.5 x 3 = 211.5 minutes
c. Divide total minutes by 60 - 211.5 ÷ 60 = 3.53 hours

2. To determine hours of care provided by each provider group utilize the total hour score from each patient care indicator located in the Neonatal Patient Classification Tabulation Form (AHS 091-12 Test) and the Neonatal Percentage Table for Care Provider Mix which follows:

PERCENTAGE TABLE FOR CARE PROVIDER MIX

NEONATAL

	PROFESSIONAL	TECHNICAL	PARAPROFESSIONAL
HYGIENE	52	36	12
NUTRITION/ ELIMINATION	60	29	11
MOBILITY/ EXERCISE/ SAFETY	61	31	8
PSYCHOLOGICAL/ FAMILY TEACHING	64	28	8
VITAL SIGNS/ ASSESSMENT/ DIAGNOSTIC TEST	65	26	9
GASTROINTESTINAL	84	15	1
RESPIRATORY	78	19	3
CARDIOVASCULAR/ TEMPERATURE REGULATION	86	11	3
SKIN	60	26	14
EENT	79	17	4
UROLOGICAL	64	24	12
MEDICATION	84	15	1
THERAPEUTIC ACTIVITIES/ MODALITIES/ OTHER	49	40	11

Professional =

Registered Professional Nurses (ANC and DAC 7-13)

Technical =

Licensed Vocational/ Technical Nurses (DAC 5-6, 91C10-40 and 91B40)

Paraprofessional =

Nursing Assistants (DAC 3-4 and 91B10-30)

a. Select the total hour score for each patient care indicator.

b. Select the personnel percentage score for each patient care indicator.

c. Multiply the total hour score for each patient care indicator by the appropriate percentage score.

EXAMPLE: Patient Care Indicator - Hygiene

a. Total Hour Score = 3.53
b. Personnel percentage score for patient care indicator =
   Professional 52%
   Technical 36%
   Paraprofessional 12%
c. Multiply total score for PCIS by the personnel percentage score =
   52% x 3.53 = 1.84 hours by professionals
   36% x 3.53 = 1.27 hours by technicians
   12% x 3.53 = .42 hours by paraprofessionals

3. To determine total hours of direct care provided by each provider group the following steps must be completed.

a. Add the rows <u>across</u> for the total hours by provider group. This will provide you the total number of hours of direct care by each provider group.

	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/Safety	Psychological/ Family Teaching	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	EENT	Urological	Medication	Therapeutic Activities/ Modalities (Other)	
TOTAL HOURS	3.53	23.65	2.15	8.53	19.03	.58	4.55	8.55	.33	.03	0	.40	0	
PROFESSIONAL	1.84	14.19	1.31	5.46	12.37	.49	3.55	7.35	.20	.02	0	.34	0	= 47.12
TECHNICAL	1.27	6.86	.67	2.39	4.95	.09	.86	.94	.08	.01	0	.06	0	= 18.18
PARAPROFESSIONAL	.42	2.60	.17	.68	1.71	0	.14	.26	.05	0	0	0	0	= 6.03

EXAMPLE:

<u>Professional</u>

1.84 + 14.19 + 1.31 + 5.46 + 12.37 + .49 + 3.55 + 7.35
+ .20 + .02 + .34 = 47.12 TOTAL HOURS BY PROVIDER GROUP

<u>Technical</u>

1.27 + 6.86 + .67 + 2.39 + 4.95 + .09 + .86 + .94 + .08
+ .01 + .06 = 18.18 TOTAL HOURS BY PROVIDER GROUP

<u>Paraprofessional</u>

.42 + 2.60 + .17 + .68 + 1.71 + .14 + .26 + .05 = 6.03
TOTAL HOURS BY PROVIDER GROUP

b. Divide the total hours for each provider group by 8 (hours/shift) to obtain number and mix of care providers required for direct care activities.

EXAMPLE:

47.12 ÷ 8 = 5.89 Professional mandays of direct care
18.18 ÷ 8 = 2.28 Technical mandays of direct care
6.03 ÷ 8 = .76 Paraprofessional mandays of direct care

4. The investigator recommends that quarterly computations of provider mix will be sufficient.

HCSD Report #81-009 (Part VII)

Nursing Care Hour Standards Study: Part VII
Pediatric Patient Classification Subsystem

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September 1981

Final Report

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NURSING CARE HOUR STANDARDS STUDY: PART VII
PEDIATRIC PATIENT CLASSIFICATION SUBSYSTEM

A. INTRODUCTION

Part VII Pediatric Patient Classification Subsystem addresses the development and testing of a multidimensional factor-evaluation designed patient classification subsystem for the pediatric clinical service. If nursing managers are to make sound administrative decisions on pediatric staffing needs, they must measure the appropriate nursing care activities and use the best measuring tool available. The best tool would be an acceptable reference standard, namely, the number of hours of nursing care required to meet safe essential patient care needs with the proper mix by skill level of care providers. The present study has attempted to develop and provide such a tool for the pediatric clinical service. The approach undertaken also considered the fact that time accountability is the principle commodity in accounting for human resource utilization.

B. OBJECTIVES

The two objectives for Part VII Pediatric Patient Classification Subsystem were:

1. To develop a factor-evaluation designed patient classification subsystem which would provide a better staffing mix based on quantified direct nursing care requirements.

2. To determine if the Pediatric Patient Classification Subsystem demonstrates validity and reliability.

C. PEDIATRIC PATIENT CLASSIFICATION SUBSYSTEM

The format and factor-evaluation design of the Pediatric Patient Classification Subsystem was devised to enable professional nurses in its use to ascertain direct nursing care requirements for inpatients. The Pediatric Patient Classification Subsystem was designed with five components: (1) patient classification instrument mathematical model; (2) patient classification instrument; (3) patient classification instrument instructional information; (4) patient classification tabulation form; and (5) methodology for determining care provider mix. The methodology for the development of each component will be discussed.

1. Pediatric Patient Classification Instrument Mathematical Model.

The pediatric patient classification instrument mathematical model (Appendix A) was designed for an automated or manual system. The design of the model delineates the direct nursing care activities, frequency rate for a 24-hour time frame, minimal essential mean tasking time, and the appropriate weighted score. The organization of the mathematical model displays all dimensions of direct patient care and all direct nursing care activities within each dimension labeled as patient care indicator. Since the primary purpose of the Pediatric Patient Classification Subsystem was to determine the need for direct nursing care resources, then the patient care indicators must represent those direct nursing care activities that have the greatest impact on nursing time. The pediatric patient classification instrument mathematical model was developed by utilizing those patient care indicators which were ascertained through timing and observational studies. The pediatric patient classification instrument mathematical model was designed with the following patient care indicators:

a. Hygiene

b. Nutrition/Elimination

c. Mobility/Exercise/Safety

d. Medication

e. Vital Signs/Assessment/Diagnostic Tests

f. Gastrointestinal

g. Respiratory

h. Cardiovascular/Temperature Regulation

i. Skin

j. Skeletal/Neurological/EENT

k. Urological

l. Psychological/Patient and Family Teaching

The number and scope of the patient care indicators included within the model are unique to the pediatric patient population. Age was considered to influence the minimal essential mean tasking time significantly; hence, the pediatric patient classification instrument mathematical model was designed for use only with the appropriate pediatric inpatient population. Those direct nursing care activities which demonstrated significant differences among the age groups are delineated in the mathematical model by age group. The pediatric age groups utilized in the development of the pediatric patient classification instrument mathematical model are as follows:

1 = <1 thru 2 years
2 = 3 thru 5 years
3 = 6 thru 11 years
4 = 12 thru 15 years

In the development of the pediatric patient classification instrument mathematical model those differences were recognized and those direct nursing care activities are delineated by age group.

The weighted score for each direct nursing care activity was determined by selecting the best common denominator to fit the total number of direct nursing care activities included within the mathematical model. The weighted factor scale which follows was utilized in developing the pediatric patient classification instrument mathematical model: three minutes equals one point; two to three minutes equals one point; and less than two minutes equals 0.5 point. This point conversion scale allows for simple arithmetic summing to quantify the hours of direct nursing care required for pediatric inpatients, and even if all of the direct nursing care activities were required for a pediatric inpatient the error rate would not exceed plus or minus thirty minutes. The pediatric patient classification instrument mathematical model was designed for the quantification of direct nursing care requirements for the neonatal, pediatric and pediatric intensive care inpatient.

2. Pediatric Patient Classification Instrument.

The pediatric patient classification instrument (Appendix B) was designed for factor evaluation. Extensive comparative analyses were conducted for the determination of the patient care indicators which were considered to represent those direct nursing care activities that have the greatest impact on nursing care time. Based upon these findings thirteen patient care indicators were incorporated within the factor-evaluation designed instrument. Hence, this type of design allows for the identification of direct nursing care activities for each patient care indicator.

The pediatric patient classification instrument was designed to provide a simple tool in which the professional nurse needs only to rate those direct nursing care activities which are appropriate for the patient being rated. The direct nursing care activities scored on the instrument must have been performed by nursing personnel or assistance provided to other staff members performing the activity. If the patient performs self-care activities, then only those direct nursing care activities performed by nursing personnel are scored. The system was designed so that each patient needs only one rating for each 24-hour rating period. The ratings are completed at the end of the 24-hour rating period and are reflective of the preceding 24-hour time frame. The normal rating period was 0700 to 0700 hours; however, patients who were hospitalized less than 24 hours were also rated. In those patients who were within the system less than 24 hours, the ratings were reflective of the time period that the patient was present within the hospital system.

The instrument was designed to allow for the actual rating of each patient to be accomplished by selecting the frequency rate for each direct nursing care activity that was required during the rating period. Therefore, rating of the patient on the pediatric patient classification instrument was accomplished by selecting the frequency rate for the required direct nursing care activity from the options provided on the instrument. Moreover, the instrument was designed so that the frequency rate for each direct nursing care activity has a corresponding point value labeled as weighted score. The format for the pediatric patient classification instrument follows the same format as the pediatric patient classification instrument mathematical model. As was presented earlier, the patient care indicators were identified as those groupings of direct nursing care activities which most influence the total patient care requirements. Based upon the design of the pediatric patient classification instrument it is the total points within each patient care indicator that determines the patient care indicator score (PCIS). The sum of the patient care indicator scores determines the total points, hours of care and category of care for the rated patient.

The pediatric patient classification instrument was developed with the following classification scheme as displayed in Table 1.

Table 1
Pediatric Patient Classification Scheme

Total Points	Hours of Care	Category of Care
1 - 39	< 1 thru 1	1
40 - 79	2 thru 3	2
80 - 159	4 thru 7	3
160 - 239	8 thru 11	4
240 - 499	12 thru 24	5

A unique feature considered in the development of the instrument is the option of including infrequently occurring direct nursing care activities which impact significantly on nursing workload, and can be included in the rating under "other therapeutic activities/modalities."

The pediatric patient classification instrument was designed to allow for collection of demographic information. The keypunch spaces one through twelve were provided for data collection which best meets the requirements of the medical treatment facility.

3. Pediatric Patient Classification Instrument Instructional Information.

The pediatric patient classification instrument instructional information component (Appendix C) was developed to provide adequate information for the user to consistently apply the same methodology for rating patients' direct care requirements. The organization of the operational definitions and weighted score for each direct nursing care activity follows the same format as the pediatric patient classification instrument mathematical model and the pediatric patient classification instrument. To reduce the redundancy of the operational definitions provided, each direct nursing care activity also includes: (a) identify and screen the patient; (b) explain the procedure to the patient; (c) raise, lower, or adjust the bed before and after the nursing activity; and (d) clean and straighten area.

In utilizing the pediatric patient classification instrument instructional information component the score for each direct nursing care activity applies only to the Pediatric Patient Classification Subsystem for which it was designed. The pediatric patient classification instrument instructional information component contains the listing of those infrequently occurring direct nursing care activities which impact significantly on nursing workload, and each of these direct nursing care activities are included in the rating under "other therapeutic activities/ modalities." This list of direct nursing care activities is not all-inclusive, as the frequency with which some direct nursing care activities occurred was not sufficient to permit an accurate analysis or generation of a valid score. Moreover, in rating the patients' direct nursing care requirements, only those activities provided are to be utilized for rating the direct care requirements.

4. Pediatric Patient Classification Tabulation Form.

The pediatric patient classification tabulation form (Appendix D) was designed for the recording of summary data. After the assessment of direct nursing care requirements has been completed by the professional nurse, the unit clerk can use the pediatric patient classification tabulation form to record the patient care indicator scores for each patient. The instructions for recording of patient data are located within the pediatric patient classification instructional information component. The data accumulated to this point will provide the necessary information for determining category of care and the hours of care within each patient care indicator for the clinical unit.

The results from extensive data analyses were utilized to design the pediatric patient classification tabulation form. These analyses demonstrated that distribution of hours of care within each patient care indicator and not the category of care determines the mix by skill level of care providers required to meet the rated direct nursing care requirements for pediatric inpatients. It must be emphasized that both category of care and hours of care within each patient care indicator can determine

man-hour requirements, but only the hours of care within each patient care indicator can determine the best mix by skill level of care providers.

Since all medical treatment facilities do not have automated systems readily available, the pediatric patient classification tabulation form was designed to allow for manual computations as well as keypunching of the patient care indicator scores. Lastly, the pediatric patient classification tabulation form was designed with the same format as the pediatric patient classification instrument mathematical model, pediatric patient classification instrument, and pediatric patient classification instrument instructional information components.

5. Methodology for Determining Care Provider Mix for Pediatrics.

The methodology for determining care provider mix for pediatrics (Appendix E) was developed for the purpose of providing the best mix by skill level of care providers. The diversity of direct nursing care activities requires a more complex mix of personnel; therefore, more sophisticated techniques are required to meet these demands. During the timing and observational studies the observers recorded the number and skill level of care providers for each direct nursing care activity. These data were utilized to establish personnel mix percentage scores for each direct nursing care activity. These personnel mix percentage scores were utilized in the development of the personnel percentage table for care provider mix for pediatric inpatients. The percentage table for provider mix for pediatrics was developed by collapsing the personnel percentage scores for each direct nursing care activity within each patient care indicator. Table 2 displays the percentage table for care provider mix for pediatrics.

The mix by skill level of care providers can easily be determined by utilizing the summary data from the pediatric patient classification tabulation form and the percentage table for care provider mix for pediatrics. This approach differs significantly from previous patient classification systems which match category of care with mix of personnel. Present findings demonstrate that the hours of care within each patient care indicator was the determinant for the mix by skill level of care providers and not the category of care. It must be noted that patient classification systems that match category of care with mix of personnel make the major assumption that all patients in the same category of care have the same direct nursing care requirements; hence, the same mix of personnel can meet those care requirements. However, the present findings do not support this assumption.

It is important to note that the percentage table for care provider mix for pediatrics was developed specifically for the pediatric clinical service and is not generalizable to other inpatient clinical services.

Table 2

Percentage Table for Care Provider Mix for Pediatrics

	Professional	Technical	Paraprofessional
Hygiene	40	43	17
Nutrition/Elimination	57	30	13
Mobility/Exercise/ Safety	57	32	11
Medication	84	15	1
Vital Signs/Assessment/ Diagnostic Tests	62	27	11
Gastrointestinal	84	15	1
Respiratory	76	21	3
Cardiovascular/ Temperature Regulation	87	11	2
Skin	55	40	5
Skeletal/Neurological/ EENT	81	13	6
Urological	70	18	12
Psychological/Patient and Family Teaching	62	30	8
Other Therapeutic Activities/Modalities	67	23	10

D. DATA COLLECTION AND DATA ANALYSIS

1. Validity Determination.

Validity studies were conducted to determine if the Pediatric Patient Classification Subsystem demonstrated content-related and criterion-related validity. Professional nursing judgment was involved in the original design of the pediatric patient classification instrument and was again required for validation of the content of the instrument. It is of importance to note that during all data collection efforts, the participants had the option of and were encouraged to indicate inadequacies in the Pediatric Patient Classification Subsystem and suggest modifications.

Having completed the content-related validity testing, correlation coefficients were computed to determine the relationship of documented direct nursing care requirements with the pediatric patient classification instrument.

Correlation coefficients for documented direct nursing care requirements with the pediatric patient classification instrument mathematical model for two independent testings are displayed in Table 3.

Table 3

Validity: Correlation Coefficients for Documented Direct Nursing Care Requirements with the Pediatric Patient Classification Instrument Mathematical Model

	Correlation Coefficients	
	Test 1	Test 2
Direct Nursing Care Requirements Mathematical Model	.98	.98

Observational studies were conducted to determine the relationship of the pediatric patient classification instrument to the actual observed and timed measurements of direct nursing care activities. The criterion-related validity coefficients for pediatrics are displayed in Table 4.

Timed measurements refer to the actual measurements by stopwatch; observed frequencies refer to actual observed frequency rates for each direct nursing care activity; and hours of care were established utilizing the appropriate minimal essential mean tasking time. Assessed requirements refer to the total hours of care established through consensus nursing judgment. As shown in Table 4 the criterion-related validity coefficients for pediatrics ranged from $r = .87$ to $r = .99$.

Table 4

Criterion-Related Validity Coefficients for Timed Measurements, Observed Frequencies and Assessed Requirements

	24-Hour Study Period			
Hours of Direct Nursing Care	Mean	SD	95% CI	Pearson's r
Timed Measurements	4.54	3.01	2.99-6.09	.87
Observed Frequencies	4.39	3.44	2.63-6.16	
Timed Measurements	4.56	3.01	3.02-6.11	.99
Assessed Requirements	4.63	3.57	2.80-6.47	
Observed Frequencies	4.39	3.44	2.63-6.16	.99
Assessed Requirements	4.63	3.57	2.80-6.47	

2. Reliability Determination.

Reliability studies were conducted to determine: (a) if the pediatric patient classification instrument demonstrated statistically significant interrater reliability for inpatient classification; and (b) if the individual patient care indicators displayed internal consistency.

Prior to initiation of the interrater reliability studies, the professional nurse raters received an orientation to and standardized instructions about the instruments used in the study. A two-hour orientation period was held for group presentation, followed by individual orientation by the project officer. The raters were given a minimum of ten days in which to practice rating patients using the Pediatric Patient Classification Subsystem.

A schedule of data collection for pediatric clinical units was devised to allow for rating of patients on two preselected days per week. The study was conducted over an eight-week period with sixteen data collection days. The time-span schedule, commencing in September 1980 and ending in January 1981, required four months to complete. The data collection periods were staggered to allow for the project officer to initiate the study within the four medical treatment facilities as follows: William Beaumont Army Medical Center; Eisenhower Army Medical Center; Darnall US Army Community Hospital, Fort Hood; and Womack US Army Community Hospital, Fort Bragg.

Sixteen data collections were conducted within the four medical treatment facilities. Ratings were completed on the entire inpatient population of all pediatric inpatient units. Each of the 690 inpatients were rated by independent, trained pairs of professional nurse raters. In order to establish a level of quality control for the data collection efforts at the unit level, the forms were collected by a facility project officer. The facility project officer was responsible for checking the instruments for completeness, legibility, reconstruction of any missing data and pairing the match pairs of data from the two professional nurse raters. At the end of each week, the facility project officer mailed the completed instruments to HCSD using the preaddressed envelopes provided by HCSD. The HCSD staff edited each instrument and recomputed all scores to assure accuracy prior to coding of data for keypunching.

The population consisted of 403 males and 287 females. A description of the patient population is presented in order to provide a framework for the analysis of the study results. The category of care by age group for rater one vs rater two is shown in Table 5.

Table 5

Category of Care by Age Group for Rater One vs Rater Two
N = 690*

Category of Care		Age Group 1	2	3	4
1	Rater One	29	19	50	28
	Rater Two	28	22	49	41
2	Rater One	94	38	53	38
	Rater Two	90	42	49	35
3	Rater One	152	57	37	23
	Rater Two	158	50	42	15
4	Rater One	58	1	0	10
	Rater Two	58	1	0	8
5	Rater One	2	0	0	0
	Rater Two	1	0	0	0

*One patient's age was outside the age group limits for pediatrics.

Age Group: 1 = 1 thru 2 years
2 = 3 thru 5 years
3 = 6 thru 11 years
4 = 12 thru 15 years

The breakdown of category of care by sex of the patients for rater one vs rater two are shown in Table 6.

Table 6

Category of Care by Sex of the Patient for Rater One vs Rater Two

Category of Care		Sex of Patient: Male	Sex of Patient: Female
1	Rater One	75	52
	Rater Two	88	53
2	Rater One	129	94
	Rater Two	121	95
3	Rater One	157	112
	Rater Two	154	111
4	Rater One	42	27
	Rater Two	40	27
5	Rater One	0	2
	Rater Two	0	1
	N	403	287

The descriptive data of the patient care indicator scores for rater one vs rater two by sex of the total population are shown in Table 7.

Table 7

Descriptive Data of Patient Care Indicator Scores for Rater One vs Rater Two by Sex

		Mean	SD	N
Male	Rater One	87.19	48.66	403
	Rater Two	84.56	50.37	
Female	Rater One	87.20	47.76	287
	Rater Two	85.79	50.67	

Category of care distribution by days of the week for rater one vs rater two are shown in Table 8.

Table 8

Category of Care by Days of the Week for Rater One vs Rater Two

Category of Care		Days of Week: Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	Rater One	20	25	10	32	20	9	11
	Rater Two	21	28	14	37	24	7	10
2	Rater One	27	43	25	33	65	13	17
	Rater Two	28	43	16	39	60	15	19
3	Rater One	57	36	37	45	47	15	32
	Rater Two	51	34	45	33	50	20	32
4	Rater One	14	10	10	12	5	6	12
	Rater Two	18	9	8	13	3	5	11
5	Rater One	0	0	1	1	0	0	0
	Rater Two	0	0	0	1	0	0	0

In the determination of interrater reliability two sets of ratings, one for total score and one for category of care, were obtained from the assessment of each of the 690 inpatients by two independent trained raters representing four medical treatment facilities. These data were analyzed using the Pearson's correlation coefficient with a resultant reliability coefficient for total score and category of care. Table 9 displays the pediatric patient classification instrument frequency distribution: rater one vs rater two for category of care. Pearson's correlation coefficient for category of care rater one vs rater two, r = .85.

Table 9

Pediatric Patient Classification Instrument
Frequency Distribution: Rater One vs Rater Two for Category of Care

N = 690

Category of Care for Rater One	Category of Care for Rater Two: 1	2	3	4	5
1	105	20	2	0	0
2	31	159	33	0	0
3	5	37	215	12	0
4	0	0	14	55	0
5	0	0	1	0	1

Pearson's r for category of care rater one vs rater two, r = .85.

Concurrently, Table 10 displays the correlation coefficient for total patient care indicator score (PCIS) by category of care. Pearson's correlation coefficient for total PCIS rater one vs rater two across categories, r = .90. In addition, all coefficients for total score and category of care were significant ($p < .001$).

Table 10

Pediatric Patient Classification Instrument
Total Patient Care Indicator Score (PCIS) by Category of Care

Category of Care		PCIS	Mean	SD	95% CI	N
1	Rater One	1 - 39	29.15	6.72	27.97-30.33	127
	Rater Two		26.00	8.50	24.58-27.42	141
2	Rater One	40 - 79	59.32	12.43	57.68-60.97	223
	Rater Two		57.85	12.95	56.11-59.59	216
3	Rater One	80 - 159	112.52	22.02	109.88-115.17	269
	Rater Two		112.59	22.28	109.89-115.28	265
4	Rater One	160 - 239	180.05	15.47	176.33-183.77	69
	Rater Two		185.08	17.84	180.69-189.39	67
5	Rater One	240 - 499	244.50	2.82	219.09-269.91	2
	Rater Two		253.00			1

Pearson's r for total PCIS rater one vs rater two across categories, r = .90.

To establish internal consistency of the pediatric patient classification instrument, two independent raters' patient care indicator scores were analyzed to determine if the individual responses to the various patient care indicators were consistent. Correlation coefficients were used to indicate the degree to which variation in the patient care indicator scores for rater one was related to variation in the patient care indicator scores for rater two. Correlation coefficients and tests of significance for rater one vs rater two for each patient care indicator across categories of care are shown in Table 11. Significance tests for each coefficient were derived from the students' t with N-2 degrees of freedom. All of the coefficients in categories one to four, with the exception of Hygiene, achieved significance at the .05 level or better. Coefficients or tests of significance were not computed for all cells in category five due to the small sample size (N = 23).

Table 11

PEDIATRIC PATIENT CLASSIFICATION INSTRUMENT

INTERCORRELATIONS OF PATIENT CARE INDICATOR SCORES

	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Medication	Vital Signs /Assessment/Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	Skeletal/ Neurological/ EENT	Urological	Psychological/ Patient & Family Teaching	Other Therapeutic Activities/ Modalities
Category 1 (<1-1 hour) (df = 86)	r=.043 p n/s	r=.622 p<.001	r=.379 p<.001	r=.786 p<.001	r=.256 p<.02	r=.809 p<.001	r=.419 p<.001	r=.216 p<.05	r=.676 p<.001	r=.683 p<.001	r=.615 p<.001	r=.562 p<.001	r=.467 p<.001
Category 2 (2-3 hours) (df = 143)	r=.677 p<.001	r=.670 p<.001	r=.482 p<.001	r=.700 p<.001	r=.667 p<.001	r=.345 p<.001	r=.695 p<.001	r=.894 p<.001	r=.618 p<.001	r=.837 p<.001	r=.363 p<.001	r=.517 p<.001	r=.662 p<.001
Category 3 (4-7 hours) (df = 169)	r=.750 p<.001	r=.776 p<.001	r=.867 p<.001	r=.782 p<.001	r=.705 p<.001	r=.999 p<.001	r=.781 p<.001	r=.861 p<.001	r=.829 p<.001	r=.801 p<.001	r=.937 p<.001	r=.857 p<.001	r=.977 p<.001
Category 4 (8-11 hours) (df = 35)	r=.800 p<.001	r=.875 p<.001	r=.914 p<.001	r=.917 p<.001	r=.901 p<.001	r=.935 p<.001	r=.995 p<.001	r=.858 p<.001	r=.372 p<.05	r=.412 p<.01	r=.935 p<.001	r=.924 p<.001	r=.480 p<.01
Category 5 (12-24 hours)	*	*	*	*	*	*	*	*	*	*	*	*	*

* Count less than 3

E. CONCLUSIONS

The Pediatric Patient Classification Subsystem has been developed and tested through four years of rigorous field research. This quantitative subsystem measures direct nursing care activities and determines the best mix by skill level of care providers for pediatric inpatients. The Pediatric Patient Classification Subsystem utilizes the factor-evaluation design, is multidimensional, and is designed for automated or manual implementation. Extensive validity and reliability studies demonstrate that the Pediatric Patient Classification Subsystem is valid and reliable.

APPENDIX A

Pediatric Patient Classification Instrument Mathematical Model

PEDIATRIC PATIENT CLASSIFICATION INSTRUMENT

MATHEMATICAL MODEL

ACTIVITY (MEAN)		(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
HYGIENE							
Bathing, Complete							
(6.2989)	Age Group - <1 thru 2 yrs	(1) 6.2989 2	(2) 12.5978 4	(3) 18.8967 6			
(9.5243)	3 thru 5 yrs	(1) 9.5243 3	(2) 19.0486 6	(3) 28.5729 10			
(18.4939)	6 thru 11 yrs	(1) 18.4939 6	(2) 36.9878 12	(3) 55.4817 18			
(24.8400)	12 thru 15 yrs	(1) 24.8400 8	(2) 49.6800 17	(3) 74.5200 25			
Sitting Shower/Shower with Assistance (6.9800)		(1) 6.9800 2					
Tub Bath (10.3946)		(1) 10.3946 3					
AM Care/AM Care, Partial (4.4939)		(1) 4.4939 1					
PM Care (10.4900)		(1) 10.4900 3					
Shampoo (13.4367)		(1) 13.4367 4					
Skin Care/ Back Rub (3.2350)		(1) 3.2350 1	(2) 6.4700 2	(3) 9.7050 3	(6) 19.4100 6	(9) 29.1150 10	(12) 38.8200 13
Bathing Face and Hands (1.1500)		(1) 1.1500 .5	(3) 2.3000 1	(3) 3.4500 1	(6) 6.9000 2	(9) 10.3500 3	(12) 13.8000 5
Oral Hygiene (2.3318)		(1) 2.3318 1	(2) 4.6636 2	(3) 6.9954 2	(6) 13.9908 5	(9) 20.9862 7	(12) 27.9816 9

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Changing Bed Linen Protector/Chux (.8357)	(1) .8357 .5	(2) 1.6714 .5	(3) 2.5071 1	(6) 5.0142 2	(9) 7.5213 3	(12) 10.0284 3
Changing Shirt (1.1484)	(1) 1.1484 .5	(2) 2.2968 1	(3) 3.4452 1	(6) 6.8904 2	(9) 10.3356 3	(12) 13.7808 5
Occupied Bed (6.3835)	(1) 6.3835 2	(2) 12.7670 4	(3) 19.1505 6	(4) 25.5340 9	(5) 31.9175 11	(6) 38.3010 13
Unoccupied Bed (5.1692)	(1) 5.1692 2	(2) 10.3384 3	(3) 15.5076 5			
NUTRITION/ELMINATION:						
Feeding (22.2249)	(1) 22.2249 7	(2) 44.4498 15	(3) 66.6747 22	(4) 88.8996 30	(5) 111.1245 37	(6) 133.3494 44
Feeding, Bottle (16.4941)	(1) 16.4941 5	(2) 32.9882 11	(3) 49.4823 16	(4) 65.9764 22	(6) 98.9646 33	(9) 148.4469 49
Feeding - Oral-Gastric/ Oral-Jejunostomy/ Gastrostomy Tube (6.6123)	(1) 6.6123 2	(2) 13.2246 4	(3) 19.8369 7	(4) 26.4492 9	(6) 39.6738 13	(9) 59.5107 20
Special Feeding, Nasogastric (18.3633)	(1) 18.3633 6	(2) 36.7266 12	(3) 55.0899 18	(4) 73.4532 24	(6) 110.1798 37	(9) 165.2697 55
Assessing Gastric Residual (1.3909)	(1) 1.3909 .5	(2) 2.7818 1	(3) 4.1727 1	(4) 5.5636 2	(6) 8.3454 3	(9) 12.5181 4
Special Feeding - Nasogastric, Continuous with Infusion Pump/Gastric Feeding Equipment (3.6928)	(1) 3.6928 1	(2) 7.3856 2	(3) 11.0784 4	(4) 14.7712 5	(6) 22.1568 7	(9) 33.2352 11
Special Feeding - Hyperalimentation, Intravenous (7.0587)	(1) 7.0587 2	(2) 14.1174 5	(3) 21.1761 7	(4) 28.2348 9		
Snack/Fluid (.5601)	(1) .5601 .5	(2) 1.1202 .5	(3) 1.6803 .5	(6) 3.3606 1	(9) 5.0409 2	(12) 6.7212 2
Serving Meal Tray, Preparation Required (2.6902)	(1) 2.6902 1	(2) 5.3804 2	(3) 8.0706 3			

ACTIVITY (MEAN)		(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Serving Meal Tray, No Preparation Required (.3826)		(1) .3826 .5	(2) .7652 .5	(3) 1.1478 .5			
Measuring and Recording Intake (.6912)		(1) .6912 .5	(3) 2.0736 1	(6) 4.1472 1	(9) 6.2208 2	(12) 8.2944 3	(24) 16.5888 6
Measuring and Recording Output - Urine (1.0239)		(1) 1.0239 .5	(3) 3.0717 1	(6) 6.1434 2	(9) 9.2151 3	(12) 12.2868 4	(24) 24.5736 8
Measuring and Recording Output - Vomitus/Drainage Bottles, All Types/Diaper or Bed Linen Weight (.8084)		(1) .8084 .5	(3) 2.4252 1	(6) 4.8504 2	(9) 7.2756 2	(12) 9.7008 3	(24) 19.4016 6
Diaper Change (1.3048)		(1) 1.3048 .5	(2) 2.6096 1	(3) 3.9144 1	(6) 7.8288 3	(9) 11.7432 4	(12) 15.6576 5
Incontinent Care							
(2.4697)	Age Group <1 thru 2 yrs	(1) 2.4697 1	(2) 4.9394 2	(3) 7.4091 2	(6) 14.8182 5	(9) 22.2273 7	(12) 29.6364 10
(4.8500)	3 thru 5 yrs	(1) 4.8500 2	(2) 9.7000 3	(3) 14.5500 5	(6) 29.1000 10	(9) 43.6500 15	(12) 58.2000 19
(5.3343)	6 thru 11 yrs	(1) 5.3343 2	(2) 10.6686 4	(3) 16.0029 5	(6) 32.0058 11	(9) 48.0087 16	(12) 64.0116 21
(7.9350)	12 thru 15 yrs	(1) 7.9350 3	(2) 15.8700 5	(3) 23.8050 8	(6) 47.6100 16	(9) 71.4150 24	(12) 95.2200 32
Giving a Bedpan (2.5162)		(1) 2.5162 1	(2) 5.0324 2	(3) 7.5486 3	(6) 15.0972 5	(9) 22.6458 8	(12) 30.1944 10
Giving a Urinal (1.6487)		(1) 1.6487 .5	(2) 3.2974 1	(3) 4.9461 2	(6) 9.8922 3	(9) 14.8383 5	(12) 19.7844 7
MOBILITY/EXERCISE/SAFETY							
Changing Patient's Position in Bed (1.0853)		(1) 1.0853 .5	(3) 3.2559 1	(6) 6.5118 2	(9) 9.7677 3	(12) 13.0236 4	(24) 26.0472 9

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Mobility - Ambulating First Time/Assistance While Walking/Bed to Stretcher/ Bed to Chair (3.3434)	(1) 3.3434 1	(3) 10.0302 3	(6) 20.0604 7	(9) 30.0906 10	(12) 40.1208 13	(24) 80.2416 27
Mobility - Bed to Floor (.7500)	(1) .7500 .5	(2) 1.5000 .5	(3) 2.2500 1	(6) 4.5000 2	(9) 6.7500 2	(12) 9.0000 3
Adjusting Position of Bed (.4306)	(1) .4306 .5	(2) .8612 .5	(3) 1.2918 .5	(6) 2.5836 1	(9) 3.8754 1	(12) 5.1672 2
Exercise - Active/ Passive (3.4150)	(1) 3.4150 1	(2) 6.8300 2	(3) 10.2450 3	(6) 20.4900 7	(9) 30.7350 10	(12) 40.9800 14
Adjusting Siderail (.2431)	(3) .7293 .5	(6) 1.4586 .5	(12) 2.9172 1	(24) 5.8344 2	(48) 11.6688 4	(96) 23.3376 8
Adjusting Restraint (1.0654)	(3) 3.1962 1	(6) 6.3924 2	(12) 12.7848 4	(24) 25.5696 9	(48) 51.1392 17	(96) 102.2784 34
MEDICATION						
Oral (1.4681)	(1) 1.4681 .5	(2) 2.9362 1	(3) 4.4043 1	(4) 5.8724 2	(6) 8.8086 3	(8) 11.7448 4
Topical (.8791)	(1) .8791 .5	(2) 1.7582 .5	(3) 2.6373 1	(4) 3.5164 1	(6) 5.2746 2	(8) 7.0328 2.
Intramuscular (.9180)	(1) .9180 .5	(2) 1.8360 .5	(3) 2.7540 1	(4) 3.6720 1		
Subcutaneous (1.1967)	(1) 1.1967 .5	(2) 2.3934 1	(3) 3.5901 1	(4) 4.7868 2		
Suppository, Rectal/ Vaginal (.8891)	(1) .8891 .5	(2) 1.7782 .5				
VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS						
Blood Pressure - Manual/ Arteriosonde (1.5094)	(1) 1.5094 .5	(3) 4.5282 2	(6) 9.0564 3	(9) 13.5846 5	(12) 18.1128 6	(24) 36.2256 12

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Rectal/Axillary Temperature, Apical Pulse and Respirations (2.7444)	(1) 2.7444 1	(3) 8.2332 3	(6) 16.4664 5	(9) 24.6996 8	(12) 32.9328 11	(24) 65.8656 22
Oral Temperature, Pulse and Respirations (1.6496)	(1) 1.6496 .5	(3) 4.9488 2	(6) 9.8976 3	(9) 14.8464 5	(12) 19.7952 7	(24) 39.5904 13
Temperature - Oral/ Rectal/Axillary (1.2633)	(1) 1.2633 .5	(3) 3.7899 1	(6) 7.5798 3	(9) 11.3697 4	(12) 15.1596 5	(24) 30.3192 10
Pulse - Radial/Brachial (.5567)	(1) .5567 .5	(3) 1.6701 .5	(6) 3.3402 1	(9) 5.0103 2	(12) 6.6804 2	(24) 13.3608 4
Pulse - Apical (1.1381)	(3) 3.4143 1	(6) 6.8286 2	(12) 12.6572 4	(24) 27.3144 9	(48) 54.6288 18	(96) 109.2576 36
Pulse - Pedal/Popiteal/ Femoral (1.1067)	(3) 3.3201 1	(6) 6.6402 2	(12) 13.2804 4	(24) 26.5608 9	(48) 53.1216 18	(96) 106.2432 35
Respirations (.8666)	(3) 2.5998 1	(6) 5.1996 2	(12) 10.3992 3	(24) 20.7984 7	(48) 41.5968 14	(96) 83.1936 28
Monitor Reading - Blood Pressure/Heart Rate - Rhythm/Pulmonary Artery Pressure/Arterial Venous Pressure (.5300)	(3) 1.5900 .5	(6) 3.1800 1	(12) 6.3600 2	(18) 9.5400 3	(24) 12.7200 4	(48) 25.4400 8
Heart Sounds Assessment (1.3159)	(1) 1.3159 .5	(2) 2.6318 1	(3) 3.9477 1	(4) 5.2636 2	(5) 6.5795 2	(6) 7.8954 3
Monitor Leads Application/Exchange (1.5455)	(1) 1.5455 .5	(2) 3.0910 1	(3) 4.6365 2			
Rhythm Strip - ECG Machine (4.5387)	(1) 4.5387 2	(2) 9.0774 3				
Pupil Reflexes (.6747)	(1) .6747 .5	(3) 2.0241 1	(6) 4.0482 1	(9) 6.0723 2	(12) 8.0964 3	(24) 16.1928 5
Mental Alertness (.8825)	(1) .8825 .5	(3) 2.6475 1	(6) 5.2950 2	(9) 7.9425 3	(12) 10.5900 4	(24) 21.1800 7

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Orientation (.4000)	(1) .4000 .5	(3) 1.2000 .5	(6) 2.4000 1	(9) 3.6000 1	(12) 4.8000 2	(24) 9.6000 3
Motor/Sensory Testing (1.0160)	(1) 1.0160 .5	(3) 3.0480 1	(6) 6.0960 2	(9) 9.1440 3	(12) 12.1920 4	(24) 24.3840 8
Measurement - Head Circumference/Chest/ Abdominal Girth/Body Length (.6313)	(1) .6313 .5	(2) 1.2626 .5	(3) 1.8939 .5	(6) 3.7878 1	(9) 5.6817 2	(12) 7.5756 3
Weight - Ambulatory (.9138)	(1) .9138 .5	(2) 1.8276 .5				
Weight - Neonate/Infant (1.6983)	(1) 1.6983 .5	(2) 3.3966 1				
Rhythm Strip - Monitor (.8610)	(1) .8610 .5	(3) 2.5830 1	(6) 5.1660 2	(9) 7.7490 3	(12) 10.3320 3	(24) 20.6640 7
Rhythm Strip Measurements (1.3743)	(1) 1.3743 .5	(3) 4.1229 1	(6) 8.2458 3	(9) 12.3687 4	(12) 16.4916 5	(24) 32.9832 11
Adjusting Cardiac Monitor/ Connecting Leads/Reset Alarm (.9929)	(3) 2.9787 1	(6) 5.9574 2	(12) 11.9148 4	(18) 17.8722 6	(24) 23.8296 8	(48) 47.6592 16
Pulmonary Assessment (1.1888)	(1) 1.1888 .5	(3) 3.5664 1	(6) 7.1328 2	(9) 10.6992 4	(12) 14.2656 5	(24) 28.5312 10
Bowel Sound Assessment (1.7076)	(1) 1.7076 .5	(3) 5.1228 2	(6) 10.2456 3	(9) 15.3684 5	(12) 20.4912 7	(24) 40.9824 14
Urine Testing - Protein (1.0554)	(1) 1.0554 .5	(3) 3.1662 1	(6) 6.3324 2	(9) 9.4986 3	(12) 12.6648 4	(24) 25.3296 8
Urine Testing - Specific Gravity (.8959)	(1) .8959 .5	(3) 2.6877 1	(6) 5.3754 2	(9) 8.0631 3	(12) 10.7508 4	(24) 21.5016 7
Urine Testing - Sugar & Acetone (1.3319)	(1) 1.3319 .5	(3) 3.9957 1	(6) 7.9914 3	(9) 11.9871 4	(12) 15.9828 5	(24) 31.9656 11
Guaiac Testing - Feces/Vomitus/GI Drainage (.9065)	(1) .9065 .5	(2) 1.8130 .5	(3) 2.7195 1	(6) 5.4390 2	(9) 8.1585 3	(12) 10.8780 4

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Situational Observation (117.8136)	(1) 117.8136 39	(2) 235.6272 79	(3) 353.4408 118			
Lumbar Puncture (15.6628)	(1) 15.6628 5					
GASTROINTESTINAL						
Nasogastric Tube - Instillation (.9689)	(1) .9689 .5	(2) 1.9378 .5	(3) 2.9067 1	(4) 3.8756 1	(5) 4.8445 2	(6) 5.8134 2
Nasogastric Tube - Insertion (4.0964)	(1) 4.0964 1	(2) 8.1928 3	(3) 12.2892 4			
Nasogastric Tube - Removal (.8127)	(1) .8127 .5					
Enema - Cleansing (7.7500)	(1) 7.7500 3	(2) 15.5000 5	(3) 23.2500 8			
RESPIRATORY						
Oxygen Administration/ Oxyhood Application/ Replacement (.5855)	(3) 1.7565 .5	(6) 3.5130 1	(9) 5.2695 2	(12) 7.0260 2	(24) 14.0520 5	(48) 28.1040 9
Oxygen Analyzer Utilization (.7325)	(3) 2.1975 1	(6) 4.3950 1	(9) 6.5925 2	(12) 8.7900 3	(24) 17.5800 6	(48) 36.1600 12
Suctioning - Oral (1.7404)	(1) 1.7404 .5	(3) 5.2212 2	(6) 10.4424 3	(9) 15.6636 5	(12) 20.8848 7	(24) 41.7696 14
Suctioning - Tracheostomy/ Naso-Tracheal/Endotracheal (3.4142)	(1) 3.4142 1	(3) 10.2426 3	(6) 20.4852 7	(9) 30.7278 10	(12) 40.9704 14	(24) 81.9408 27
Suctioning - Bulb Syringe (.7024)	(1) .7024 .5	(2) 1.4048 .5	(3) 2.1072 1	(6) 4.2144 1	(9) 6.3216 2	(12) 8.4288 3
Chest Pulmonary Therapy - Frappage with Postural Drainage (5.8615)	(1) 5.8615 2	(2) 11.7230 4	(3) 17.5845 6	(6) 35.1690 12	(9) 52.7535 18	(12) 70.3380 23

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Cough and Deep Breathe (1.4200)	(1) 1.4200 .5	(2) 2.8400 1	(3) 4.2600 1	(6) 8.5200 3	(9) 12.7800 4	(12) 17.0400 6
Blow Bottles/ Incentive Spirometer (2.5734)	(1) 2.5734 1	(2) 5.1468 2	(3) 7.7202 3	(6) 15.4404 5	(9) 23.1606 8	(12) 30.8808 10
Maximist Treatment (12.5473)	(1) 12.5473 4	(2) 25.0946 8	(3) 37.6419 13	(6) 75.2838 25	(9) 112.9257 38	(12) 150.5676 50
Tracheostomy - Dressing Change (3.9747)	(1) 3.9747 1	(2) 7.9494 3	(3) 11.9241 4	(4) 15.8988 5	(5) 19.8735 7	(6) 23.8482 8
IPPB Treatment (3.0277)	(1) 3.0277 1	(2) 6.0554 2	(3) 9.0831 3	(4) 12.1108 4	(5) 15.1385 5	(6) 18.1662 6
Positioning for X-Ray (4.9143)	(1) 4.9143 2	(2) 9.8286 3	(3) 14.7429 5			
Respiratory Resuscitation (36.7680)	(1) 36.7680 12	(2) 73.5360 25	(3) 110.3040 37			
CARDIOVASCULAR/TEMPERATURE REGULATION						
Venipuncture - Blood Sample/Culture						
(6.2132) Age group - <1 thru 5 yrs	(1) 6.2132 2	(2) 12.4264 4	(3) 18.6396 6	(4) 24.8528 8	(5) 31.0660 10	(6) 37.2792 12
(3.7390) 6 thru 15 yrs	(1) 3.7390 1	(2) 7.4780 2	(3) 11.2170 4	(4) 14.9560 5	(5) 18.6950 6	(6) 22.4340 7
Arterial Puncture - Blood Gases (6.2581)	(1) 6.2581 2	(2) 12.5162 4	(3) 18.7743 6			
Heelstick - Blood Sample (6.1220)	(1) 6.1220 2	(2) 12.2440 4	(3) 18.3600 6	(6) 36.7320 12	(9) 55.0980 18	(12) 73.4640 24
Intravenous/Arterial Line - Blood Sample (2.3489)	(1) 2.3489 1	(2) 4.6978 2	(3) 7.0467 2	(6) 14.0934 5	(9) 21.1401 7	(12) 28.1868 9
Intravenous Infusion - Initiating						
(13.8341) Age group - <1 thru 5 yrs	(1) 13.8341 5	(2) 27.6682 9	(3) 41.5023 14	(6) 83.0046 28	(9) 124.5069 42	(12) 166.0092 55

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
(8.1669) 6 thru 15 yrs	(1) 8.1669 3	(2) 16.3338 5	(3) 24.5007 8	(4) 32.6676 11	(5) 40.8345 14	(6) 49.0014 16
Scalp Vein Infusion - Initiating (15.2183)	(1) 15.2183 5	(2) 30.4366 10	(3) 45.6549 15	(4) 60.8732 20	(5) 76.0915 25	(6) 91.3098 30
Intravenous Infusion - Changing IV Bottle (1.6009)	(1) 1.6009 .5	(2) 3.2018 1	(3) 4.8027 2	(4) 6.4036 2	(5) 8.0045 3	(6) 9.6054 3
Intravenous Infusion - Flow Rate (.9078)	(6) 5.4468 2	(12) 10.8936 4	(24) 21.7872 7	(48) 43.5744 15	(72) 65.3616 21	(96) 87.1488 29
Intravenous Infusion - IV Push Medication/Piggy-Back Medication (2.0502)	(1) 2.0502 1	(3) 6.1506 2	(6) 12.3012 4	(9) 18.4518 6	(12) 24.6024 8	(24) 49.2048 16
Intravenous Infusion - Platelets/Plasma/Blood (6.2515)	(1) 6.2515 2	(3) 18.7545 6	(6) 37.5090 13	(9) 56.2635 19	(12) 75.0180 25	
Intravenous Infusion - Infusion Pump Setup (4.7233)	(1) 4.7233 2	(2) 9.4466 3	(3) 14.1699 5	(4) 18.8932 6	(5) 23.6165 8	(6) 28.3398 9
Intravenous/Arterial Line - Termination (3.7844)	(1) 3.7844 1	(2) 7.5688 3	(3) 11.3532 4	(4) 15.1376 5	(5) 18.9220 6	(6) 22.7064 8
Intravenous Infusion - IV Catheter Care (8.4231)	(1) 8.4231 3	(2) 16.8462 7				
Hypothermia/Hyperthermia Treatment (5.3303)	(1) 5.3303 2					
SKIN						
Small Dressing Change, < 4" x 8" (6.7900)	(1) 6.7900 2	(2) 13.5800 5	(3) 20.3700 7	(4) 27.1600 9	(5) 33.9500 11	(6) 40.7400 14
Large Dressing Change, ≥ 4" x 8" (7.7325)	(1) 7.7325 3	(2) 15.4650 5	(3) 23.1975 8	(4) 30.9300 10	(5) 38.6625 13	(6) 46.3950 15
Cold Compress (7.5625)	(1) 7.5625 3	(2) 15.1250 5	(3) 22.6875 8	(4) 30.2500 10	(5) 37.8125 13	(6) 45.3750 15

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Hot Compress (3.0833)	(1) 3.0833 1	(2) 6.1666 2	(3) 9.2499 3	(4) 12.3332 4	(5) 15.4165 5	(6) 18.4998 6
K-Pad Application (1.2000)	(1) 1.2000 .5	(2) 2.4000 1	(3) 3.6000 1	(4) 4.8000 2	(5) 6.0000 2	(6) 7.2000 2
Heat Lamp (.9218)	(1) .9218 .5	(2) 1.8436 .5	(3) 2.7654 1	(4) 3.6872 1	(5) 4.6090 2	(6) 5.5308 2
Culture - Wound/ Nose/Throat (.5667)	(1) .5667 .5	(2) 1.1334 .5	(3) 1.7001 .5			
Surgical Prep, Local (3.4300)	(1) 3.4300 1					
Isolation, Gowning and Gloving (1.3916)	(6) 8.3496 3	(12) 16.6992 6	(24) 33.3984 11	(36) 50.0976 17	(48) 66.7968 22	(72) 100.1952 33
SKELETAL/NEUROLOGICAL/EENT						
Ice Pack (.6960)	(1) .6960 .5	(2) 1.3920 .5	(3) 2.0880 1	(4) 2.7840 1	(6) 4.1760 1	(8) 5.5680 2
Extremity Traction - Application (3.4100)	(1) 3.4100 1	(2) 6.8200 2	(3) 10.2300 3	(4) 13.6400 5		
Ace Bandage (3.4833)	(1) 3.4833 1	(2) 6.9666 2 10	(3) 10.4499 3	(4) 13.9332 5		
Extremity Traction - Adjust (2.5445)	(3) 7.6335 3	(6) 15.2670 5	(9) 22.9005 8	(12) 30.5340 10	(18) 45.8010 15	(24) 61.0680 20
Extremity Elevation (.9511)	(3) 2.8533 1	(6) 5.7066 2	(9) 8.5599 3	(12) 11.4132 4	(18) 17.1198 6	(24) 22.8264 8
Cast Care (1.0340)	(3) 3.1020 1	(6) 6.2040 2	(9) 9.3060 3	(12) 12.4080 4	(18) 18.6120 6	(24) 24.8160 8
Circulation Check (1.2037)	(3) 3.6111 1	(6) 7.2222 2	(12) 14.4444 5	(24) 28.8888 10	(48) 57.7776 19	(96) 115.5552 39

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Seizure Care (11.2300)	(1) 11.2300 4	(2) 22.4600 7	(3) 33.6900 11			
Instillation of Drops - Eye/Ear/Nose (.7462)	(1) .7462 .5	(2) 1.4924 .5	(3) 2.2386 1	(4) 2.9848 1	(5) 3.7310 1	(6) 4.4772 1
Culture - Sputum (2.3000)	(1) 2.3000 1	(2) 4.6000 2	(3) 6.9000 2			
UROLOGICAL						
Catheterization - Straight (11.1567)	(1) 11.1567 4	(2) 22.3134 7	(3) 33.4701 11	(4) 44.6268 15	(6) 66.9402 22	(8) 89.2536 30
Urine Collection Bag - Application (1.4410)	(1) 1.4410 .5	(2) 2.8820 1	(3) 4.3230 1	(4) 5.7640 2	(6) 8.6460 3	
Urine Specimen - Clean Catch/Foley (3.1240)	(1) 3.1240 1	(2) 6.2480 2	(3) 9.3720 3	(4) 12.4960 4	(6) 18.7440 6	
Urine Specimen - Routine (1.7167)	(1) 1.7167 .5	(2) 3.4334 1	(3) 5.1501 2			
PSYCHOLOGICAL/PATIENT AND FAMILY TEACHING						
Answering Patient's Question/Crying (.7626)	(3) 2.2878 1	(6) 4.5756 2	(12) 9.1512 3	(18) 13.7268 5	(24) 18.3024 6	(48) 36.6048 12
Visiting with Patient/ Purposeful Interaction (1.5331)	(3) 4.5993 2	(6) 9.1986 3	(12) 18.3972 6	(18) 27.5958 9	(24) 36.7944 12	(48) 73.5888 25
Holding Newborn/ Infant (8.7565)	(1) 8.7565 3	(2) 17.5130 6	(3) 26.2695 9	(6) 52.5390 18	(9) 78.8085 26	(12) 105.0780 35
Explanation of Procedures and Tests (1.4140)	(1) 1.4140 .5	(2) 2.8280 1	(3) 4.2420 1	(6) 8.4840 3	(9) 12.7260 4	(12) 16.9680 6
Orientation to Clinical Unit (5.1613)	(1) 5.1613 2	(2) 10.3226 3	(3) 15.4839 5			

ACTIVITY (MEAN)	(FREQUENCY) TOTAL SCORE WEIGHTED SCORE					
Planned Recreational Activity Session (12.7200)	(1) 12.7200 4	(2) 25.4400 8	(3) 38.1600 13			
Teaching - Disease/ Condition Related (4.4452)	(1) 4.4452 1	(2) 8.8904 3	(3) 13.3356 4	(6) 26.6712 9	(9) 40.0068 13	(12) 53.3424 18
Teaching - Dietary Explanation (5.6200)	(1) 5.6200 2	(2) 11.2400 4	(3) 16.8600 6			
Teaching - Diagnostic Test (1.0804)	(1) 1.0804 .5	(2) 2.1608 1	(3) 3.2412 1			
Teaching - Blow Bottles/ Incentive Spirometer (2.6800)	(1) 2.6800 1	(2) 5.3600 2	(3) 8.0400 3			
Teaching - Preoperative Instruction (40.0000)	(1) 40.0000 13					
Teaching - Dressing Change (2.5800)	(1) 2.5800 1					
Teaching - Medication Administration (19.5881)	(1) 19.5881 7					

APPENDIX B

Pediatric Patient Classification Instrument

a. Patient's Hospital Card

PEDIATRIC PATIENT CLASSIFICATION INSTRUMENT

TOTAL PCIS Points	WEIGHTED SCORE (Points)	CATEGORY (Circle One)
	1 - 39	1
	40 - 79	2
	80 - 159	3
	160 - 239	4
	240 - 499	5

b. Date: _____ c. Rater's Name: _____

HYGIENE

	FREQUENCY SCORE	1	2	3
Bathing, Complete -				
Age Group - <1 thru 2 years		2	4	6
3 thru 5 years		3	6	10
6 thru 11 years		6	12	18
12 thru 15 years		8	17	25
Sitting Shower/Shower with Assistance		2		
Tub Bath		3		
AM Care/AM Care, Partial		1		
PM Care		3		
Shampoo		4		

	1	2	3	6	9	12
Skin Care/Back Rub	1	2	3	6	10	13
Bathing, Face and Hands	.5	1	1	2	3	5
Oral Hygiene	1	2	2	5	7	9
Changing Bed Linen Protector/Chux	.5	.5	1	2	3	3
Changing Shirt	.5	1	1	2	3	5

	1	2	3	4	5	6
Occupied Bed	2	4	6	9	11	13
Unoccupied Bed	2	3	5			

PCIS [ ][ ][ ] . [ ]
13-15 16

NUTRITION/ELIMINATION

	FREQUENCY	1	2	3	4	5	6
Feeding	SCORE	7	15	22	30	37	44

	1	2	3	4	6	9
Feeding, Bottle	5	11	16	22	33	49
Assessing Gastric Residual	.5	1	1	2	3	4
Special Feeding - Oral-Gastric/Oral-Jejunostomy/Gastrostomy Tube	2	4	7	9	13	20
Special Feeding, Nasogastric	6	12	18	24	37	55
Special Feeding - Nasogastric, Continuous with Infusion Pump/Gastric Feeding Equipment	1	2	4	5	7	11
Special Feeding - Hyperalimentation, IV	2	5	7	9		

	1	2	3	6	9	12
Snack/Fluid	.5	.5	.5	1	2	2
Serving Meal Tray, Preparation Required	1	2	3			
Serving Meal Tray, No Preparation Required	.5	.5	.5			

	1	3	6	9	12	24
Measuring and Recording Intake	.5	1	1	2	3	6
Measuring and Recording Output - Urine	.5	1	2	3	4	8
Measuring and Recording Output - Vomitus/Drainage Bottles, All Types/Diaper or Linen Weight	.5	1	2	2	3	6

	1	2	3	6	9	12
Diaper Change	.5	1	1	3	4	5
Incontinent Care -						
Age Group - 1 thru 2 years	1	2	2	5	7	10
3 thru 5 years	2	3	5	10	15	19
6 thru 11 years	2	4	5	11	16	21
12 thru 15 years	3	5	8	16	24	32
Giving a Bedpan	1	2	3	5	8	10
Giving a Urinal	.5	1	2	3	5	7

PCIS [ ][ ][ ] . [ ]
17-19 20

MOBILITY/EXERCISE/SAFETY

	FREQUENCY	1	3	6	9	12	24
Changing Patient's Position in Bed	SCORE	.5	1	2	3	4	9
Mobility - Ambulating First Time/Assistance While Walking/Bed to Stretcher/Bed to Chair		1	3	7	10	13	27

	1	2	3	6	9	12
Mobility - Bed to Floor	.5	.5	1	2	2	3
Adjusting Position of Bed	.5	.5	.5	1	1	2
Exercise - Active/Passive	1	2	3	7	10	14

	3	6	12	24	48	96
Adjusting Siderail	.5	.5	1	2	4	8
Adjusting Restraint	1	2	4	9	17	34

PCIS [ ][ ][ ] . [ ]
21-23 24

MEDICATION

	FREQUENCY	1	2	3	4	6	8
Oral	SCORE	.5	1	1	2	3	4
Topical		.5	.5	1	1	2	2
Intramuscular		.5	.5	1	1		
Subcutaneous		.5	1	1	2		
Suppository, Rectal/Vaginal		.5	.5				

PCIS [ ][ ][ ] . [ ]
25-27 28

VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS

FREQUENCY / SCORE	1	3	6	9	12	24
Blood Pressure - Manual/Arteriosonde.	.5	2	3	5	6	12
Rectal/Axillary Temperature, Apical Pulse and Respirations.	1	3	5	8	11	22
Oral Temperature, Pulse and Respirations.	.5	2	3	5	7	13
Temperature - Oral/Rectal/Axillary.	.5	1	3	4	5	10
Pulse - Radial/Brachial	.5	.5	1	2	2	4

	3	6	12	24	48	96
Pulse - Apical.	1	2	4	9	18	36
Pulse - Pedal/Popiteal/Femoral.	1	2	4	9	18	35
Respirations.	1	2	3	7	14	28

	3	6	12	18	24	48
Monitor Reading - Blood Pressure/Heart Rate - Phythm/Pulmonary Artery Pressure/Arterial Venous Pressure.	.5	1	2	3	4	8

	1	2	3	4	5	6
Heart Sounds Assessment	.5	1	1	2	2	3
Monitor Leads Application/Exchange.	.5	1	2			
Rhythm Strip - ECG Machine.	2	3				

	1	3	6	9	12	24
Pupil Reflexes.	.5	1	1	2	3	5
Mental Alertness.	.5	1	2	3	4	7
Orientation	.5	.5	1	1	2	3
Motor/Sensory Testing	.5	1	2	3	4	8

	1	2	3	6	9	12
Measurement - Head Circumference/Chest/ Abdominal Girth/3ody Length	.5	.5	.5	1	2	3
Weight - Ambulatory	.5	.5				
Weight - Neonate/Infant	.5	1				

	1	3	6	9	12	24
Rhythm Strip - Monitor.	.5	1	2	3	3	7
Rhythm Strip Measurements	.5	1	3	4	5	11

	3	6	12	18	24	48
Adjusting Cardiac Monitor/Connecting Leads/ Reset Alarm	1	2	4	6	8	16

	1	3	6	9	12	24
Pulmonary Assessment.	.5	1	2	4	5	10
Bowel Sound Assessment.	.5	2	3	5	7	14
Urine Testing - Protein	.5	1	2	3	4	8
Urine Testing - Specific Gravity.	.5	1	2	3	4	7
Urine Testing - Sugar & Acetone	.5	1	3	4	5	11

	1	2	3	6	9	12
Guaiac Testing - Feces/Vomitus/GI Drainage.	.5	.5	1	2	3	4
Situational Observation	39	79	118			
Lumbar Puncture	5					

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GASTROINTESTINAL

FREQUENCY / SCORE	1	2	3	4	5	6
Nasogastric Tube - Instillation	.5	.5	1	1	2	2
Nasogastric Tube - Insertion.	1	3	4			
Nasogastric Tube - Removal.	.5					

	1	2	3
Enema - Cleansing	3	5	8

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RESPIRATORY

	FREQUENCY SCORE	3	6	9	12	24	48
Oxygen Administration		.5	1	2	2	5	9
Oxygen Analyzer Utilization		1	1	2	3	6	12

	1	3	6	9	12	24
Suctioning - Oral	.5	2	3	5	7	14
Suctioning - Tracheostomy/Naso-Tracheal/ Endotracheal	1	3	7	10	14	27

	1	2	3	6	9	12
Suctioning - Bulb Syringe	.5	.5	1	1	2	3
Chest Pulmonary Therapy - Frappage with Postural Drainage	2	4	6	12	18	23
Cough and Deep Breathe	.5	1	1	3	4	6
Blow Bottles/Incentive Spirometer	1	2	3	5	8	10
Maximist Treatment	4	8	13	25	38	50

	1	2	3	4	5	6
Tracheostomy - Dressing Change	1	3	4	5	7	8
IPPB Treatment	1	2	3	4	5	6
Positioning for X-Ray	2	3	5			
Respiratory Resuscitation	12	25	37			

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CARDIOVASCULAR/TEMPERATURE REGULATION

	FREQUENCY SCORE	1	2	3	4	5	6
Venipuncture - Blood Sample/Culture - Age Groups - 1 thru 5 years		2	4	6	8	10	12
6 thru 15 years		1	2	4	5	6	7
Arterial Puncture - Blood Gases		2	4	6			

	1	2	3	6	9	12
Heelstick - Blood Sample	2	4	6	12	18	24
Intravenous/Arterial Line - Blood Sample	1	2	2	5	7	9
IV Infusion - Initiating - Age Groups -<1 thru 5 years	5	9	14	28	42	55

	1	2	3	4	5	6
Age Groups - 6 thru 15 years	3	5	8	11	14	16
Scalp Vein Infusion - Initiating	5	10	15	20	25	30
IV Infusion - Changing IV Bottle	.5	1	2	2	3	3

	6	12	24	48	72	96
IV Infusion - Flow Rate	2	4	7	15	21	29

	1	3	6	9	12	24
IV Infusion - IV Push Medication/ Piggy-Back Medication	1	2	4	6	8	16
IV Infusion - Platelets/Plasma/Blood	2	6	13	19	25	

	1	2	3	4	5	6
IV Infusion - Infusion Pump Setup	2	3	5	6	8	9
Intravenous/Arterial Line - Termination	1	3	4	5	6	8
IV Infusion - IV Catheter Care	3	7				
Hypothermia/Hyperthermia Treatment	2					

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SKIN

	FREQUENCY	1	2	3	4	5	6
Small Dressing Change, < 4" x 8". . .	SCORE	2	5	7	9	11	14
Large Dressing Change, ≥ 4" x 8".		3	5	8	10	13	15
Cold Compress		3	5	8	10	13	15
Hot Compress.		1	2	3	4	5	6
K-Pad Application		.5	1	1	2	2	2
Heat Lamp		.5	.5	1	1	2	2
Culture - Wound/Nose/Throat		.5	.5	.5			
Surgical Prep, Local.		1					

	6	12	24	36	48	72
Isolation, Gowning and Gloving.	3	6	11	17	22	33

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SKELETAL/NEUROLOGICAL/EENT

	FREQUENCY	1	2	3	4	6	8
Ice Pack.	SCORE	.5	.5	1	1	1	2
Extremity Traction - Application.		1	2	3	5		
Ace Bandage		1	2	3	5		

	3	6	9	12	18	24
Extremity Traction - Adjust	3	5	8	10	15	20
Extremity Elevation	1	2	3	4	6	8
Cast Care	1	2	3	4	6	8

	3	6	12	24	48	96
Circulation Check	1	2	5	10	19	39

	1	2	3
Seizure Care.	4	7	11

	1	2	3	4	5	6
Instillation of Drops - Eye/Ear/Nose.	.5	.5	1	1	1	1
Culture - Sputum.	1	2	2			

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UROLOGICAL

	FREQUENCY	1	2	3	4	6	8
Catheterization - Straight.	SCORE	4	7	11	15	22	30
Urine Collection Bag - Application.		.5	1	1	2	3	
Urine Specimen - Clean Catch/Foley.		1	2	3	4	6	
Urine Specimen - Routine.		.5	1	2			

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PSYCHOLOGICAL/PATIENT AND FAMILY TEACHING

FREQUENCY	3	6	12	18	24	48
Answering Patient's Question/Crying . .SCORE	1	2	3	5	6	12
Visiting with Patient/Purposeful Interaction.	2	3	6	9	12	25

	1	2	3	6	9	12
Holding Newborn/Infant.	3	6	9	18	26	35
Explanation of Procedures and Tests	.5	1	1	3	4	6
Orientation to Clinical Unit.	2	3	5			
Planned Recreational Activity Session	4	8	13			

	1	2	3	6	9	12
Teaching - Disease Condition Related.	1	3	4	9	13	18
Teaching - Dietary Explanation.	2	4	6			
Teaching - Diagnostic Test.	.5	1	1			
Teaching - Blow Bottles/Incentive Spirometer.	1	2	3			
Teaching - Preoperative Instruction	13					
Teaching - Dressing Change.	1					
Teaching - Medication Administration.	7					

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Locate required nursing activity on the Pediatric Nursing Activities Tasking Document and calculate total points based on the weighted score provided. (Specify activity(s) and Total Score(s)).

THERAPEUTIC ACTIVITIES/MODALITIES (OTHER)

Nursing Activity	Frequency Rate	X	Score	=	Sub-Total
_____	____		____		____
_____	____		____		____
_____	____		____		____

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APPENDIX C

Pediatric Patient Classification Instrument Instructional Information

PEDIATRIC PATIENT CLASSIFICATION INSTRUMENT

INSTRUCTIONAL INFORMATION

1. Demographic Information:

a. Stamp the Pediatric Patient Classification Instrument with the patient's Hospital Card in the space provided.

b. Record the date of the data collection period. Note that the rater completes this form at the end of the 24-hour period.

c. Record the rater's name in the appropriate blank.

d. Utilize the keypunch spaces 1 through 12 to collect data which best meets the requirements for your medical treatment facility. This demographic data could include such items as the following:

(1) Age of Patient

(2) Sex of Patient

(3) Day of the Week

(4) SI or VSI Status

(5) Clinical Service

2. The Pediatric Patient Classification Instrument is an objective factor evaluation designed rating instrument. Extensive clinical observation combined with time and frequency studies were undertaken to identify those direct nursing care activities which most influence the total patient care requirements. These groupings of nursing activities, listed below, are considered to be Patient Care Indicators. Each nursing activity is operationally defined in the attached Tasking Document. The sum of the total points within each patient care indicator will become the Patient Care Indicator Score (PCIS).

a. Hygiene

b. Nutrition/Elimination

c. Mobility/Exercise/Safety

d. Medication

e. Vital Signs/Assessment/Diagnostic Tests

f. Gastrointestinal

g. Respiratory

h. Cardiovascular/Temperature Regulation

i. Skin

j. Skeletal/Neurological/EENT

k. Urological

l. Psychological/Patient and Family Teaching

m. Therapeutic Activities/Modalities (Includes "Other" nursing activities)

3. The patient classification instrument is simple in that the professional nurse needs only to rate those nursing activities which are appropriate for the patient being rated. The nursing activities scored on the instrument must have been performed by nursing personnel or assistance provided to other staff members performing the activity. If the patient performs self-care activities, then score only those nursing activities performed by nursing personnel. Each patient needs only one rating for each 24-hour period. The rating of each patient must be completed at the end of the 24-hour period and must reflect the nursing care requirements for the preceding 24 hours. The normal rating period will be 0700 to 0700 hours, however, patients who are hospitalized less than 24 hours must also be rated. The ratings of these patients must be reflective of the time period that the patient was present within the hospital system.

4. The actual rating of each patient is accomplished by selecting the frequency rate for each nursing activity that was required during the rating period. The rating of the patient on the classification instrument is then accomplished by selecting the frequency rate from the options provided on the instrument. Select the frequency rate for each nursing activity that best meets the care requirements for the patient being rated. Each frequency rate has a corresponding point value (weighted score) as denoted in the blocks below each frequency rate.

EXAMPLE:

	1	2	3	6	9	12
Oral Hygiene.	1	2	2	5	(7)	9

This nursing activity with a frequency of "9" will receive a score of "7". Circle the appropriate score. After circling the score for each appropriate nursing activity, sum the scores within each Patient Care Indicator. Record this point value in the space provided as indicated in the following example:

EXAMPLE:

MEDICATION

FREQUENCY	1	2	3	4	6	8
SCORE						
Oral.	.5	1	(1)	2	3	4
Topical	.5	.5	(1)	1	2	2
Intramuscular	(.5)	.5	1	1		
Subcutaneous.	.5	1	1	2		
Suppository, Rectal/Vaginal	.5	.5				

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This Patient Care Indicator (Medication) consists of "3" Oral, "3" Topical, and "1" Intramuscular for a total of "2.5" points.

5. If the patient requires a nursing activity that is not included on the Pediatric Patient Classification Instrument, this additional procedure should be followed:

Locate the Nursing Activity Tasking Document (pages 16 thru 21) and obtain the score (points) for that activity. This point value is for a frequency of one, therefore, you must then multiply that figure by the appropriate frequency rate.

EXAMPLE:

GASTROINTESTINAL:	
COLOSTOMY - DRESSING CHANGE: Place equipment at bedside, remove soiled dressing, cleanse skin and stoma, apply clean dressing, and then remove equipment from area.	5

Should the patient require three colostomy dressing change procedures during the 24-hour period, multiply the frequency of "3" times the score of "5". Indicate the activity(s) selected and the total point value clearly on the instrument (i.e., Colostomy - Dressing Change = 15).

6. The total PCIS points (sum of the Patient Care Indicator Scores) determines the patient's Category of Care. Indicate the Total PCIS Points and circle the appropriate Category on page 1 of the Pediatric Patient Classification Instrument.

EXAMPLE:

TOTAL PCIS Points	WEIGHTED SCORE (Points)	CATEGORY (Circle One)
159.5	1 - 39	1
	40 - 79	2
	80 - 159	(3)
	160 - 239	4
	240 - 499	5

ROUND DOWN THE FRACTIONS: For example, anything less that "160" TOTAL PCIS Points will have the WEIGHTED SCORE of "159" and will remain CATEGORY "3".

7. The Pediatric Patient Classification-Tabulation Form was developed for the recording of the Patient Care Indicator Scores (PCISs). These scores are to be recorded on this tabulation form along with the patient's name and age.

PEDIATRIC PATIENT CLASSIFICATION TABULATION FORM

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 39	<1 - 1	1	
40 - 79	2 - 3	2	
80 - 159	4 - 7	3	
160 - 239	8 - 11	4	
240 - 499	12 - 24	5	

Patient Care Indicator Scores

Nursing Unit _____

Date _____

Rater's Signature _____

Bed No.	Age	Name of Patient	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Medication	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	Skeletal/ Neurological/ PPNT	Urological	Psychological/ Patient and Family Teaching	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care

Each operational definition includes: (1) Identify and screen the patient; (2) Explain the procedure to the patient/family; (3) Raise, lower or adjust the bed before and after the nursing activity; and (4) Clean and straighten area.

HYGIENE:	SCORE
BATHING, COMPLETE: Place equipment at bedside; remove shirt and diaper, bathe face, chest, abdomen and extremities; change water, bathe back, buttocks and perineal area; replace shirt and diaper; and remove equipment from area.	
Age Group I (less that one year thru 2 years)	2
BATHING, COMPLETE: Place equipment at bedside; remove pajamas, bathe face, chest, abdomen and extremities; change water, bathe back, buttocks and perineal area; replace pajamas; and remove equipment from area.	
Age Group II (3 years thru 5 years)	3
Age Group III (6 years thru 11 years)	6
Age Group IV (12 years thru 15 years)	8
SITTING SHOWER/SHOWER WITH ASSISTANCE: Upon arrival in the shower room, assist patient in undressing, into shower, with bath and hair shampoo, assist in redressing, and back into the wheelchair.	2
TUB BATH: Upon arrival in bathroom, assist patient in undressing, into bathtub, with bath and assist in redressing; then back into the wheelchair.	3
AM CARE: Place equipment at bedside, assist patient with bathing face, hands and brushing teeth; then remove equipment from area	1
OR	
AM CARE, PARTIAL: Place equipment at bedside, prepare bath water, put toothpaste on toothbrush; and remove equipment from area when patient has completed AM Care.	
PM CARE: Place equipment at bedside; bathe face and hands, brush teeth, and rub back; tighten and straighten bed linens; then remove equipment from area.	3
SHAMPOO: Place equipment at bedside; position patient, wet hair and apply shampoo, lather and rinse, dry hair with towel, comb and brush hair; and then remove equipment from area.	4
SKIN CARE: Place equipment at bedside, cleanse and dry areas for special care, apply lotion, and then remove equipment from area. (Buttocks, hips, shoulders, heels.) OR BACK RUB: Place equipment at patient's bedside, remove pajama top, turn patient to expose back, rub back with lotion, replace pajama top , and then remove equipment from area.	1
BATHING, FACE AND HANDS: Upon arrival at bedside, bathe face and hands, then remove used equipment from area.	.5
ORAL HYGIENE: Place equipment at bedside, turn patient to his/her side, cleanse gums, teeth and mouth with swabs; then remove equipment from area.	1
CHANGING BED LINEN PROTECTOR/CHUX: Upon arrival at bedside, position patient, remove soiled chux, place clean chux under patient, straighten bed; then remove used chux from area.	.5
CHANGING SHIRT: Upon arrival at bedside, change soiled shirt, position patient; then remove soiled shirt from area.	.5

SCORE

OCCUPIED BED: Place linen at bedside; turn patient on side, roll linen to one side of bed, replace with clean linen, turn patient to freshly made side of bed, remove soiled linen and complete bed making; then remove soiled linen from bed. 2

UNOCCUPIED BED: Place linen at bedside, remove soiled linen, place bottom sheet on mattress, then place on top sheet; change pillow cases; remove soiled linen from area. 2

NUTRITION/ELIMINATION:

FEEDING: Place meal tray at bedside; place towel or napkin as bib; prepare the food, feed patient slowly with appropriate utensils; then remove tray from area. 7

FEEDING - BOTTLE: Place equipment at bedside, pick up baby, wrap in blanket, hold in feeding position, feed baby, bubble baby, reposition in bed, and then remove equipment from bedside. 5

OR

FEEDING - GRADUATED FEEDER, PREMATURE: Place equipment at bedside, pick up baby, wrap in blanket, hold in feeding position, feed baby, bubble baby, reposition in bed (Isolette, Incubator, etc.), and then remove equipment from area.

ASSESSING GASTRIC RESIDUAL: Place equipment at bedside, position baby, insert oral-gastric feeding tube, aspirate stomach contents, remove oral-gastric feeding tube, calculate/measure volume, record results, and then remove equipment from area. .5

SPECIAL FEEDING - ORAL-GASTRIC TUBE: Place equipment at bedside, position baby, insert feeding tube, assess placement, check stomach for residual, instill feeding, remove feeding tube, bubble baby, position, and then remove equipment from area. 2

OR

SPECIAL FEEDING - ORAL-JEJUNOSTOMY TUBE: Place equipment at bedside, uncoil and unclamp tube, assess placement, administer feeding; flush tube with water, clamp tube, recoil and replace tube and then remove feeding equipment from area.

OR

SPECIAL FEEDING - GASTROSTOMY: Place feeding at bedside, uncoil and unclamp tube, administer feeding, flush tube with water, clamp tube, recoil and replace tube, and then remove feeding equipment from area.

SPECIAL FEEDING - NASOGASTRIC: Place feeding at bedside, unclamp tube, assess placement of tube, administer tube feeding, flush tube with water, clamp tube, record, and then remove feeding equipment from area. 6

SPECIAL FEEDING - NASOGASTRIC/CONTINUOUS WITH INFUSION PUMP SETUP: Place equipment at bedside; remove and/or position feeding bottle, connect to feeding tube, set up through flow rate adjuster of equipment, establish flow rate, record on Intake and Output Record; then remove equipment from area. 1

OR

SPECIAL FEEDING - NASOGASTRIC, CONTINUOUS WITH GASTRIC FEEDING EQUIPMENT: Place equipment at bedside; connect to feeding tube/nasogastric tube, adjust flow rate, record on Intake and Output Record; then remove equipment from area.

SPECIAL FEEDING - HYPERALIMENTATION, INTRAVENOUS: Determine calibration of infusion equipment, place hyperalimentation fluids at bedside, exchange filter and tubing, establish scheduled flow rate, record; remove equipment from area. 2

	SCORE
SNACK: Place snack at bedside and, if required, prepare food for eating.	.5
OR FLUID: Place fluids at bedside, place plastic drinking tube in liquid, give liquid to patient, then remove drinking cup and/or place within reach at patient's bedside.	
SERVING MEAL TRAY, PREPARATION REQUIRED: Place tray at bedside, prepare food and utensils, and prepare towel or napkin as bib.	1
SERVING MEAL TRAY, NO PREPARATION REQUIRED: Place tray at bedside.	.5
MEASURING & RECORDING INTAKE: Place calibrated cylinder/container at bedside; measure or calculate fluids and record amount on Intake and Output Record: then remove used equipment from area.	.5
MEASURING & RECORDING OUTPUT - URINE: Place calibrated cylinder at bedside; measure or calculate volume, record amount on Intake and Output Record; then remove equipment from area.	.5
MEASURING & RECORDING OUTPUT - VOMITUS: Remove emesis from patient's bedside, measure vomitus in calibrated cylinder, record amount on Intake and Output Record.	.5
OR	
MEASURING & RECORDING OUTPUT - DRAINAGE BOTTLES, ALL TYPES: Place calibrated cylinder at bedside, pour contents from drainage bottle into calibrated cylinder, measure or calculate volume, replace drainage bottle, record amount on Intake and Output Record, and then remove equipment from area.	
OR	
OUTPUT WEIGHT - DIAPERS/BED LINENS: Upon the completion of the procedure for diaper change/bed linen change, remove items to be weighed, weigh on weight scales, and then record results.	
DIAPER CHANGE: Upon arrival at bedside, expose baby, remove soiled diaper, cleanse buttocks and genitalia, diaper baby, position and cover baby, and then remove equipment from area.	.5
INCONTINENT CARE: Place equipment at patient's bedside, bathe buttocks, perineum and thighs; change bedding; then remove equipment and soiled linen from area.	
Age Group I (less than one year thru 2 years)	1
Age Group II (3 years thru 5 years)	2
Age Group III (6 years thru 11 years)	2
Age Group IV (12 years thru 15 years)	3
GIVING A BEDPAN: Place bedpan at bedside, place patient on bedpan, provide toilet tissue, remove patient from bedpan, cover bedpan, and remove from area.	1
GIVING A URINAL: Place urinal at patient's bedside, remove cover, adjust patient's pajamas for placement of urinal, remove urinal from patient, replace cover; then remove urinal from area.	.5

MOBILITY/EXERCISE/SAFETY:	SCORE
CHANGING PATIENT'S POSITION IN BED: Remove support pillows, reposition patient; apply support pillows.	.5
MOBILITY - AMBULATING FIRST TIME: Assist patient into sitting position on side of bed; then into upright standing position; walk with patient; then assist back into bed.	1
OR	
MOBILITY - ASSISTANCE WHILE WALKING: Assist patient into a sitting position on side of bed, then into an upright standing position, then with ambulation, and then back into bed.	
OR	
MOBILITY - BED TO CHAIR: Position chair/wheelchair at bedside, assist patient into sitting position, slowly bring patient into an upright standing position; then assist into chair or reverse process.	
MOBILITY - BED TO FLOOR: Assist patient into sitting position on side of bed, then slowly bring patient into upright standing position; then assist back into bed.	.5
ADJUSTING POSITION OF BED: Raise, lower or adjust position of bed.	.5
EXERCISE - ACTIVE: Supervise the patient as he/she actively performs the prescribed exercise program.	1
OR	
EXERCISE - PASSIVE: Manually move patient's extremities through the prescribed exercise program.	
ADJUSTING SIDERAIL: Change position of siderails, i.e., up, down or removal.	.5
ADJUSTING RESTRAINT: Upon arrival at bedside, replace or apply restraints to upper and/or lower extremities, and then depart from area.	.5
MEDICATION:	
ORAL: Upon arrival at bedside, obtain a glass of water and administer the oral medication.	.5
TOPICAL: Place equipment at bedside, locate and expose site for topical application of medication, apply medication, and then remove equipment from area.	.5
INTRAMUSCULAR: Place equipment at bedside, locate site for injection, administer medication, and then remove equipment from area.	.5
SUBCUTANEOUS: Place equipment at bedside, locate site for injection, administer medication, and then remove equipment from area.	.5
SUPPOSITORY - RECTAL/VAGINAL: Place equipment at bedside, prepare and administer suppository; then remove equipment from area.	.5

SCORE

VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS:

BLOOD PRESSURE: Place equipment at bedside, place cuff around extremity, position stethoscope, measure blood pressure, remove cuff, record results; remove equipment from area. .5

OR

BLOOD PRESSURE, ARTERIOSONDE: Upon arrival at bedside, apply electrode gel to cuff, position cuff around extremity, measure blood pressure, remove cuff, cleanse gel from extremity, store equipment at bedside, and then record results.

RECTAL/AXILLARY TEMPERATURE, APICAL PULSE, & RESPIRATIONS: Place equipment at bedside, position temperature probe. Place stethoscope over apex of heart and count rate. Count and calculate respiratory rate. Remove temperature probe or thermometer, record results of measurements; then remove equipment from area. 1

ORAL TEMPERATURE, PULSE AND RESPIRATIONS: Place equipment at bedside, position temperature probe or thermometer. Place fingers over radial artery pulse and count rate. Count respiratory rate while fingers are placed over radial artery pulse. Remove fingers from radial artery pulse rate, record results of measurements, and then remove equipment from area. .5

TEMPERATURE - ORAL, ELECTRONIC/MERCURY: Place equipment at bedside, place probe or thermometer under tongue, measure temperature, remove temperature probe or thermometer, record and then remove equipment from area. .5

OR

TEMPERATURE - RECTAL, ELECTRONIC/MERCURY: Place equipment at bedside, adjust clothing, insert temperature probe or thermometer in anus, measure temperature, remove temperature probe or thermometer, record, and then remove equipment from area.

OR

TEMPERATURE - AXILLARY, ELECTRONIC/MERCURY: Place equipment at bedside, place temperature probe or thermometer in axillary area, measure temperature, remove temperature probe or thermometer, record and then remove equipment from area.

PULSE - RADIAL/BRACHIAL: Place fingers over radial or brachial pulse and count rate, remove fingers from radial pulse area and record results. .5

PULSE - APICAL: Place equipment at bedside, place stethoscope over apex of heart and count rate, remove stethoscope, record pulse rate, and then remove equipment from area. .5

PULSE - PEDAL/FEMORAL/POPITEAL: Place fingers on the dorsalis pedis, popiteal or femoral artery pulse and count rate. Remove fingers from pulse area and record results. .5

RESPIRATIONS: Count respiratory rate and/or count and calculate rate, and then record.

MONITOR READING - BLOOD PRESSURE/HEART RATE-RHYTHM/PULMONARY ARTERY PRESSURE/CENTRAL VENOUS PRESSURE: Upon arrival at bedside, assess and record findings. .5

HEART SOUNDS ASSESSMENT: Place stethoscope at bedside, arrange pajamas for visual access of chest, assess and record findings; remove stethoscope from area. .5

MONITOR LEADS - APPLICATION/EXCHANGE: Place equipment at bedside, exchange leads or apply new leads, and then remove equipment from area. .5

SCORE

RHYTHM STRIP - ECG MACHINE: Place equipment at bedside, prepare equipment for use, apply limb leads, obtain 20 second strip, record name, date and time, remove limb leads; then remove equipment from area. 2

PUPIL REFLEXES: Place equipment at bedside, adjust room lighting, assess pupillary reflexes with flashlight and remove equipment from area. .5

MENTAL ALERTNESS: Upon arrival at bedside, assess level of alertness. .5

ORIENTATION: Upon arrival at bedside, make inquiries within the framework of interviewing that will give information about patient's orientation for time, place and person, and then record results. .5

MOTOR/SENSORY TESTING: Upon arrival at bedside, assess extremities for sensation awareness and muscle strength. .5

HEAD CIRCUMFERENCE MEASUREMENT: Place measuring tape at bedside, measure head circumference, record results; then store tape measure at bedside. .5

OR

CHEST MEASUREMENT: Place measuring tape at bedside, obtain chest measurement, record results; then store tape measure at bedside.

OR

ABDOMINAL GIRTH MEASUREMENT: Place measuring tape at bedside, expose and measure abdominal girth, record results, and then store tape measure at bedside.

OR

BODY LENGTH MEASUREMENT: Place measuring tape at bedside, measure body length, record results; then store tape measure at bedside.

AMBULATORY WEIGHT: Place equipment at bedside, assist patient onto the scales, balance scales, read and record weight reading, assist patient off the scales, and then remove equipment from area, .5

WEIGHT - NEONATE/INFANT: Upon arrival at bedside, remove clothing, place baby on balanced Infant Weight Scales, assess and record weight, return baby to bed, dress baby, and remove used equipment from area. .5

RHYTHM STRIP - MONITOR: Obtain 20 second strip, record name, date and time, then file for future use. .5

RHYTHM STRIP MEASUREMENTS: Upon obtaining the rhythm strip, measure P-R interval, S-T segment, and assess for arrhythmic pattern; then record results. .5

ADJUSTING CARDIAC MONITOR/CONNECTING LEADS/RESET ALARM: Upon arrival at bedside, adjust cardiac monitor, connect leads or reset the alarm; then depart from area. .5

PULMONARY ASSESSMENT: Upon arrival initiate assessment by auscultation of the lungs and/or percussion of the chest wall over the involved areas. Assess symmetry of chest and determine if respiratory movement is abdominal or thoracic. .5

BOWEL SOUND ASSESSMENT: Upon arrival at bedside, utilize a stethoscope to assess status of bowel sounds, then remove equipment from area. .5

URINE TESTING - PROTEIN: Upon arrival at bedside, collect urine sample, utilizing test strip assess for albumin, compare test strip against standard, read and record results; then remove used equipment from area. .5

SCORE

URINE TESTING - SPECIFIC GRAVITY: Place equipment at bedside, collect urine sample and utilizing a urometer, measure specific gravity, record results, and then remove equipment from area. .5

URINE TESTING - SUGAR & ACETONE: Place equipment at bedside, collect urine sample, measure sugar and acetone, record results, then remove equipment from area. .5

GUAIAC TESTING - FECES/VOMITUS/GI DRAINAGE: Upon obtaining sample, test sample for guaiac, record results, and then remove from area. .5

SITUATIONAL OBSERVATION: Assingment of one member of the nursing team to observe and provide nursing care to the patient during a specific activity. Observation required only during the specific activity, this might include, but is not limited to, transport within or without the hospital when the patient is not stable enough to be left without nursing support. 39

LUMBAR PUNCTURE: Place equipment at bedside, assist physician with procedure, and then remove equipment from area. 5

GASTROINTESTINAL:

NASOGASTRIC TUBE - INSTILLATION: Place medication and/or normal saline at bedside, unclamp or disconnect tube, instill solution with asepto syringe, reclamp or reconnect tubing; then remove equipment from area. .5

NASOGASTRIC TUBE - INSERTION: Place equipment at bedside, secure towel around patient's neck, give patient glass of water, instruct patient on how to swallow tube, lubricate tube, insert tube, assess for placement, tape in position, then remove equipment from area or when non-responsive omit glass of water and instructions. 1

NASOGASTRIC TUBE - REMOVAL: Place towel around patient's neck, position patient, remove tape, clamp tube and remove tubing, and then remove equipment from area. .5

ENEMA - CLEANSING: Place equipment at bedside, position patient, lubricate tubing, insert rectal tube, administer solution; then remove equipment from area. 3

RESPIRATORY:

OXYGEN ADMINISTRATION - RESPIRATOR: Upon arrival at bedside assess and/or regulate oxygen and ventilator pressures, assess all tubing for patency and collection of fluids within tubing, assess fluid level in water vapor container, and then assess proper position of alarms. .5

OR

OXYGEN ADMINISTRATION - MIST WITH COLLAR/FACE TENT: Place equipment at bedside, turn on oxygen, position equipment; then secure, evaluate, and regulate oxygen flow rate.

OR

OXYGEN ADMINISTRATION - MASK: Place equipment at bedside, turn on oxygen, fit mask over the mouth and nose, adjust headband, evaluate fit and patient's adjustment to equipment, and regulate oxygen flow rate.

OR

OXYGEN ADMINISTRATION - PRONGS: Place equipment at bedside, fit nasal prongs and adjust headband, regulate oxygen rate; evaluate patient's adjustment to oxygen and equipment.

SCORE

OR

OXYHOOD - APPLICATION/REPLACEMENT: Place oxyhood over infant's head, position oxygen sensor equipment and position additional tubing if required.

OXYGEN ANALYZER - UTILIZATION: Upon arrival at bedside, assess the oxygen concentration utilizing the oxygen analyzer; adjust if indicated and record results. .5

SUCTIONING - ORAL: Place equipment or set up equipment at bedside, suction oral cavity with suction catheter or oral suction tip, flush catheter before and after each aspiration, replace used equipment, and remove used equipment from area. .5

SUCTIONING - TRACHEOSTOMY: Set up equipment, put on sterile gloves, suction and flush catheter before and after each aspiration, replace used equipment, and remove used equipment from area. 1

OR

SUCTIONING - NASO-TRACHEAL: Set up equipment at bedside, put on sterile gloves, pass nasal catheter and suction, flush catheter before and after each aspiration, replace used equipment, and then remove used equipment from area.

OR

SUCTIONING - ENDOTRACHEAL: Set up sterile equipment at bedside, put on sterile gloves, suction through endotracheal tube, flush catheter before and after each use, bag breathe between each aspiration, remove gloves, replace used equipment, and then remove used equipment from area.

SUCTIONING - BULB SYRINGE: Upon arrival at bedside, utilize the bulb syringe to suction the nose or mouth or both nose and mouth. .5

CHEST PULMONARY THERAPY - FRAPPAGE WITH POSTURAL DRAINAGE: Upon arrival at bedside, position patient, initiate treatment by auscultation of lung fields. Perform percussion to each involved segment followed by vibration. 2

COUGH AND DEEP BREATHE: Upon arrival at bedside, have patient cough and deep breathe, if cough productive then dispose of sputum. .5

BLOW BOTTLES: Place equipment at bedside, assist with placement of bottles, have patient perform procedure; then locate equipment at bedside for next treatment. 1

OR

INCENTIVE SPIROMETER: Place spirometer at bedside, assist patient during the procedure to determine proper usage of spirometer, and then remove or replace to storage area at bedside.

MAXIMIST TREATMENT: Upon arrival at bedside, prepare nebulizer, position patient, assure proper breathing technique and administer treatment. 4

TRACHEOSTOMY - DRESSING CHANGE: Place equipment at bedside, remove soiled dressing, cleanse skin, replace dry dressing, change tracheostomy ties as indicated, and then remove soiled equipment from area. 1

IPPB TREATMENT: Place equipment in position of use, assist patient during the treatment, and replace equipment after use. 1

POSITIONING FOR X- RAY: Upon arrival at bedside, assist with positioning of x-ray film; then assist with removal of exposed film. 2

SCORE

RESPIRATORY RESUSCITATION: Place equipment at bedside. Check all equipment, assist physician with insertion of endotracheal/tracheostomy tube, bag breathe as indicated, connect respiratory; then remove equipment from area. 12

CARDIOVASCULAR/TEMPERATURE REGULATION:

VENIPUNCTURE - BLOOD SAMPLE: Place equipment at bedside. Apply tourniquet to extremity, cleanse site, perform venipuncture and withdraw blood sample, and then apply pressure to puncture site. Apply labels on blood tubes and remove equipment from area.

OR

VENIPUNCTURE - BLOOD CULTURE: Place equipment at bedside, apply tourniquet to extremity, clean site, perform venipuncture and withdraw blood sample, and then apply pressure to puncture site. Apply labels on blood culture bottle and remove equipment from area.

Age Group I (less than one year thru 2 years) 2

Age Group II (3 years thru 5 years) 2

Age Group III (6 years thru 11 years) 1

Age Group IV (12 years thru 15 years) 1

ARTERIAL PUNCTURE - BLOOD GASES: Place equipment at bedside, locate arterial puncture site, perform puncture and draw blood, and then place sample on ice. Apply pressure to puncture site; then label sample and remove equipment from area. 2

HEELSTICK - BLOOD SAMPLE: Place equipment at bedside, expose lower extremity cleanse skin, utilizing a lancet puncture heel, obtain desired sample, apply pressure to puncture site, label specimen, and then remove equipment from bedside. 2

INTRAVENOUS/ARTERIAL LINE - BLOOD SAMPLE: Place equipment at bedside, clear system, obtain blood sample through stopcock, flush system, label samples, and then remove equipment from bedside. 1

INTRAVENOUS INFUSION - INITIATING: Place equipment at bedside, apply tourniquet to extremity, cleanse site, perform venipuncture and connect IV tubing, apply ointment and dressing, and tape securely. Calculate and regulate flow rate, record on Intake and Output Record, and remove equipment from area.

Age Group I (less than one year thru 2 years) 5

Age Group II (3 years thru 5 years) 4

Age Group III (6 years thru 11 years) 3

Age Group IV (12 years thru 15 years) 3

INTRAVENOUS INFUSION - INITIATING SCALP VEIN: Place equipment at bedside, hold and/or restrain during procedure, prep area, select site and perform venipuncture, tape into place, connect to intravenous solution, record on I&O Record; then remove equipment from area. 5

INTRAVENOUS INFUSION - CHANGING IV BOTTLES: Place equipment at bedside, remove used IV container and replace with new IV container, calculate and regulate flow rate, record on I&O Record, and remove equipment from area. .5

INTRAVENOUS INFUSION - FLOW RATE: Upon arrival at bedside, calculate and adjust flow rate as specified. .5

INTRAVENOUS INFUSION - IV PUSH MEDICATION: Place equipment at bedside, select site for injection of solution utilizing existing system, administer IV solution, and remove equipment from area. 1

SCORE

OR

INTRAVENOUS INFUSION - PIGGY-BACK MEDICATION: Place equipment at bedside, select site for injection of solution utilizing existing system, record on I&O Record, and remove equipment from area. 1

INTRAVENOUS INFUSION - PLATELETS/PLASMA: Place equipment at bedside, connect to present intravenous system, record on I&O Record; and remove equipment from area. 2

OR

INTRAVENOUS INFUSION - BLOOD: Place equipment at bedside, assure correct transfusion, etc., connect to present intravenous system, record on I&O Record, and remove equipment from area.

INTRAVENOUS INFUSION - INFUSION PUMP SETUP: Place equipment at bedside, set up IV tubing and adjust flow rate dial. Record on I&O Record and remove used equipment from area. 2

INTRAVENOUS/ARTERIAL INFUSION - TERMINATING: Place equipment at bedside, remove dressing and terminate IV or arterial catheter/needle, apply pressure to site, and record on I&O if appropriate. Remove equipment from area. 1

INTRAVENOUS INFUSION - IV CATHETER CARE: Place equipment at bedside, remove dressing from IV catheter site, cleanse skin, apply ointment, replace dressing and then date, time and initial the dressing, change IV tubing, and remove equipment from area. 3

HYPOTHERMIA/HYPERTHERMIA TREATMENT: Place equipment at bedside, apply blankets, assess status of equipment. Insert rectal temperature probe for monitoring, and then remove unused equipment from area. 2

SKIN:

SMALL DRESSING CHANGE, < 4"x 8": Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, and then remove equipment from area. 2

LARGE DRESSING CHANGE, ≥ 4"x 8": Place equipment at bedside, remove soiled dressing, cleanse skin, apply dressing to site, and then remove equipment from area. 3

COLD COMPRESS: Place equipment at bedside, apply cold compress to site and then remove equipment from area. 3

HOT COMPRESS: Place equipment at bedside, apply hot compress to site and then remove equipment from area. 1

APPLICATION OF K-PAD: Upon arrival at bedside, apply K-pad to prescribed area, then depart from area. .5

HEAT LAMP: Place or position lamp at bedside, expose site, and apply heat lamp. .5

WOUND CULTURE: Place equipment at bedside, remove soiled dressing, obtain culture from site, label culture, apply new dressing, and then remove equipment from area. .5

OR

CULTURE - NOSE: Place equipment at bedside, position patient, obtain nose culture, label culture, and remove equipment from area.

SCORE

OR

CULTURE - THROAT: Place equipment at bedside, position patient, obtain throat culture, label culture, and remove equipment from area. .5

SURGICAL PREP, LOCAL: Place equipment at bedside, prepare skin for prep, shave area specified, and then remove equipment from area. 1

ISOLATION - GOWNING & GLOVING: Upon arrival at isolation area, wash hands, put on isolation gown, mask and gloves, or when departing the isolation area, remove isolation gown, mask and gloves; then wash hands. .5

SKELETAL/NEUROLOGICAL/EENT:

ICE PACK: Place ice bag at bedside, remove old ice bag and replace with new ice bag, secure ice bag in place; then remove equipment from area. .5

EXTREMITY TRACTION - APPLICATION: Place equipment at bedside, apply non-invasive type traction to extremity, apply weights, and then remove unused equipment from area. 1

ACE BANDAGE: Place equipment at bedside, wrap extremity securely with ace bandage and secure in place with tape or metal hooks. 1

EXTREMITY TRACTION - ADJUST: Upon arrival at bedside, assess the position of the weights and the alignment of the traction equipment. 1

EXTREMITY ELEVATION: Place equipment at bedside, elevate extremity through use of pillows, bed adjustments and/or sling attachments. .5

CAST CARE: Upon arrival at bedside, assess for pain, swelling, numbness, tingling, coldness and bluish discoloration of the skin. Evaluate the patient's ability to move the part, and then assess the temperature of the cast and the skin area around the cast. .5

CIRCULATION CHECK: Upon arrival at bedside check extremity for swelling, numbness, and tingling, evaluate temperature and color of the skin, and then assess the patient's ability to move the part. .5

SEIZURE CARE: Upon arrival in the patient's area, place padded tongue blade in position, and support patient during the seizure. 4

INSTILLATION OF DROPS - EYE: Upon arrival at bedside, position patient, instill eye drops, and then remove equipment from area. .5

OR

INSTILLATION OF DROPS - EAR: Upon arrival at bedside, position patient, instill ear drops, and then remove equipment from area.

OR

INSTILLATION OF DROPS - NOSE: Upon arrival at bedside, position patient, instill nose drops, and then remove equipment from area.

CULTURE - SPUTUM: Place equipment at bedside, position patient, have patient cough to obtain sputum, apply label to sputum specimen, and then remove equipment from area. 1

SCORE

UROLOGICAL:

CATHETERIZATION - STRAIGHT: Place equipment at bedside, prepare patient and insert catheter, empty bladder and remove straight catheter; then remove used equipment from area. 4

URINE COLLECTION BAG - APPLICATION: Place equipment at bedside, expose area, apply urine collection bag, and then remove equipment from area. .5

URINE SPECIMEN - CLEAN CATCH/FOLEY: Place equipment at bedside, instruct patient on how to collect specimen, or collect specimen, label specimen, and then remove specimen from area. 1

URINE SPECIMEN - ROUTINE: Place equipment at bedside, instruct patient on how to collect specimen, label specimen, and then remove specimen from area. .5

PSYCHOLOGICAL/PATIENT AND FAMILY TEACHING:

ANSWERING PATIENT'S QUESTION/CRYING: Time spent in answering patient's questions or in response to the patient call system or patient crying. .5

VISITING WITH PATIENT/PURPOSEFUL INTERACTION: Time spent at patient's bedside without providing any direct physical care to patient which is not in response to patient call system or patient questions. .5

HOLDING - NEWBORN/INFANT: Upon arrival at bedside, wrap baby in blanket, pick up and hold baby (may be standing or sitting during the procedure) and when completed position in bed, and cover with blanket. 3

EXPLANATION OF PROCEDURES AND TESTS: Instruct patient on what he/she can expect from procedure/test, what the health care personnel will be doing during the procedure/test, and why such a procedure/test is being done. .5

ORIENTATION TO CLINICAL UNIT: Instruct on the use of the nurse's call system, the hospital bed, and the layout of the physical facility. 2

PLANNED RECREATIONAL ACTIVITY SESSION: Assign a member of the nursing team to supervise patient during the activity. 4

TEACHING - DISEASE/CONDITION RELATED: Upon arrival at bedside, provide instruction on the nature and scope of the disease process, special care requirements, limitations and/or restrictions related to disease illness. 1

TEACHING - DIETARY EXPLANATION: Upon arrival at bedside, provide instruction on dietary requirements/restrictions. 2

TEACHING - DIAGNOSTIC TEST: Upon arrival at bedside, provide information on the purpose and requirements for the diagnostic test. .5

TEACHING - BLOW BOTTLES/INCENTIVE SPIROMETER: Place equipment at bedside, instruct patient on the purpose and use of equipment. 1

TEACHING - PREOPERATIVE INSTRUCTION: Upon arrival at bedside, provide instruction on preoperative and postoperative requirements. (Skin preparation, cough and deep breathe, ankle exercise and position change.) 13

TEACHING - DRESSING CHANGE: Upon arrival at bedside, provide instruction on technique of dressing change, skin care and how to recognize abnormal conditions related to disease/injury. 1

TEACHING - MEDICATION ADMINISTRATION: Upon arrival at bedside, provide instruction on dosage, route and specific drug related information. 7

OTHER NURSING ACTIVITIES WHICH MAY BE USED TO DETERMINE CATEGORY OF CARE:

SCORE

HYGIENE:

BATHING, ASSIST WITH BACK AND LEGS: Place equipment at bedside, remove pajamas, allow for patient bathing as if in attendance; change water; then bathe back and lower extremities; replace pajamas and remove equipment from area.

Age Group II (3 years thru 5 years)	3
Age Group III (6 years thru 11 years)	3
Age Group IV (12 years thru 15 years)	6

BATHING, UTENSILS PROVIDED: Place equipment at bedside, allow time for patient to bathe and change pajamas; then remove equipment from area. .5

AM CARE, UTENSILS PROVIDED: Place equipment at bedside, and then remove equipment from area when patient finishes AM Care. .5

CHANGING LINENS, NEWBORN: Place equipment at bedside, change crib sheet, cover crib sheet with diaper, position baby, and then remove soiled linen from area. 1

NUTRITION/ELIMINATION:

MEASURING & RECORDING OUTPUT - LIQUID FECES: Remove bedpan from patient's bedside; measure feces in calibrated cylinder, record amount on I&O Record. .5

MOBILITY/EXERCISE/SAFETY:

MOBILITY - SITTING ON SIDE OF BED: Assist patient into sitting position on side of bed; then assist patient back into supine position. .5

FOWLERS/TRENDELENBERG POSITION: Upon arrival at bedside, position bed in either Fowlers or Trendelenberg position, assess comfort of patient in this position, and then depart from area. .5

TURNING FRAME, ALL TYPES: Remove or secure support pillows and devices, place and secure restraining straps, unlock frame, turn frame according to specifications, lock frame, remove restraining straps, adjust pillows and support devices. 3

VITAL SIGNS/ASSESSMENT/DIAGNOSTIC TESTS:

PULSE - DOPPLER: Place equipment at bedside, place sensor over pulse area, assess and record pulse rate; then remove equipment from area (types of equipment may vary). 1

EXTREMITY CIRCUMFERENCE MEASUREMENT: Upon arrival at bedside, place tape around the extremity/extremities and assess measurement; then record results. .5

PULMONARY ARTERY PRESSURE: Check placement of equipment, read, and record pressure readings. .5

CENTRAL VENOUS PRESSURE, MANUAL: Set up equipment for measurement of pressure, position patient and assess sternal angle, measure pressure, restore equipment to original position, and record results. .5

SCORE

12 LEAD ECG: Place equipment at bedside, connect leads to patient and obtain ECG. Record name, date and time on ECG. Remove leads and clean skin, then remove equipment from area. 3

BED SCALE WEIGHT: Place equipment at bedside, assist patient onto the scales, read and record weight reading, assist patient in getting off the scales, and then remove equipment from area. 3

HEMATOCRIT: Upon obtaining the blood sample, process, assess and record the results. 2

BLOOD SAMPLE - DEXTROSTICK: Place equipment at bedisde, expose lower extremity, cleanse area, utilizing a lancet puncture heel, obtain desired blood sample, apply pressure to puncture site, process sample for 15 seconds, read and record results; then remove equipment from area. 1

COLLECTION OF FECES SAMPLE: Upon obtaining a feces sample, place sample in collection container, label, and then remove from area. .5

BONE MARROW ASPIRATION: Place equipment at bedside, assist physician with procedure, and then remove equipment from area. 5

VENTRICULAR TAP: Set up equipment, expose baby, hold and/or restrain during the procedure, assist physician as required, label specimen; then remove equipment from area. 6

PHYSICAL EXAMINATION: Prepare baby for examination by the physician, hold baby as required, and remove used equipment from area at the completion of the exam. 3

GASTROINTESTINAL:

NASOGASTRIC TUBE - IRRIGATION: Place irrigation solution at bedside, unclamp or disconnect tube, irrigate tubing with asepto syringe, reclamp or reconnect tubing; then remove equipment from area. 1

FECAL IMPACTION - ASSESSMENT/REMOVAL: Upon arrival at bedside, position patient, put on rubber gloves, assess for fecal impaction and then manually break up fecal mass; then remove used equipment from area. .5

ENEMA - RETENTION: Place equipment at bedside, position patient, administer solution; then remove equipment from area. .5

DRESSING CHANGE - ILEOSTOMY/ILEOCONDUIT: Place equipment at bedside, remove ileostomy bag or dressing, cleanse skin and stoma area, replace ileostomy bag or dressing, and remove equipment from area. 3

COLOSTOMY - DRESSING CHANGE: Place equipment at bedside, remove soiled dressing, cleanse skin and stoma, apply clean dressing, and then remove equipment from area. 5

COLOSTOMY - IRRIGATION: Place equipment at bedside, remove colostomy bag/dressing, administer irrigation solution, allow for return of fluid and feces, cleanse skin and stoma, reapply colostomy bag/dressing; then remove equipment from area. 8

SCORE

RESPIRATORY:

CROUP TENT: Place equipment at bedside, position equipment over the bed, fill vaporizer with solution, place thermometer, assess status of patient's adjustment to croup tent, assess temperature inside croup tent; then depart from area. 3

INTUBATION: Place equipment at bedside, assist physician during the intubation process, tape endotracheal tube in place and remove equipment from area. 3

EXTUBATION: Place equipment at bedside, assist physician with removal of endotracheal tube; then remove equipment from area. 1

TRACHEOSTOMY - TUBE CHANGE: Place equipment at bedside, untie tracheostomy strings, remove and replace tracheostomy tube, cleanse skin, tie tracheostomy strings, and then remove equipment from area. 2

TRACHEOSTOMY - CLEANING CANNULA: Place or utilize equipment at bedside, complete tracheostomy suction, remove, clean and replace inner tube, and then remove soiled equipment and replace with clean equipment. 2

CHEST TUBE - INSERTION: Place all equipment at bedside, assist physician with insertion of chest tube, prepare water-sealed drainage bottles, tape all connections and drainage bottles; then remove equipment from area. 8

CHEST TUBE - REMOVAL: Place equipment at bedside, assist physician with removal of chest tube, apply pressure dressing; then remove equipment from area. 3

CHEST TUBE - CARE: Set up equipment at bedside, remove dressing around chest tube, cleanse skin, replace dressing, tape securely, and then remove equipment from area. 4

CHEST TUBE - CHANGING BOTTLES: Place prepared chest tube bottles at bedside, clamp chest tube, change drainage tube and bottles, secure drainage bottles and tops with tape, unclamp chest tube, and then remove used equipment from area. 7

THORACENTESIS: Place equipment at bedside, obtain vital signs, assist physician and support patient during the procedure, repeat vital signs, measure and record aspiration fluids, and then remove equipment from area. 3

CARDIOVASCULAR/TEMPERATURE REGULATION:

CARDIOPULMONARY RESUSCITATION: Upon arrival at bedside, perform any or all aspects of cardiopulmonary resuscitation. 4

ARTERIAL LINE - ARTERIAL LINE SETUP: Place equipment at bedside, set up transducer tray, IV solution and cardiac monitor. Assist physician with insertion of arterial catheter. Calibrate the cardiac monitor, and measure the transducer current with a mercury sphygomomanometer. Remove equipment from area 6

ARTERIAL LINE - INITIATION: Place equipment at bedside, assist physician with the procedure as required, connect to arterial line setup, assess status of arterial line; then remove equipment from area. 14

SCORE

ARTERIAL INFUSION - TRANSDUCER EXCHANGE: Place equipment at bedside, set up transducer tray and IV solution, calibrate the cardiac monitor, and measure the transducer current with a mercury sphygomomanometer. Remove equipment from area. 5

SURGICAL INTRAVENOUS INITIATION, CUT DOWN: Place equipment at bedside, assist physician with the procedure as required, connect to intravenous line setup, assess status of intravenous line; then remove equipment from area. 21

RADIANT WARMER - APPLICATION: Set up equipment, place baby in bed, apply temperature probe; then assess status of baby and equipment. 1

ISOLETTE - APPLICATION: Set up equipment, place baby in bed, apply temperature probe; then assess status of baby and equipment. .5

TEMPERATURE PROBE - APPLICATION/EXCHANGE: Upon arrival at bedside, tape temperature probe to exposed skin surface (may be used with or without reflector). .5

SPONGING: Place equipment at bedside, expose areas for sponging, position ice bags, sponge skin with ordered solution and then remove equipment from area. 5

SKIN:

SURGICAL PREP, 3-WAY: Place equipment at bedside, prepare skin for prep, shave area specified, and then remove used equipment from bedside. Instruct patient to shower with surgical soap three times. 1

DECUBITUS CARE: Place or position equipment at bedside, cleanse skin, apply heat lamp and/or expose to light. 3

UMBILICAL CORD - CARE: Place equipment at bedside, cleanse umbilicus with antiseptic solution, expose to air and dry; then remove equipment from area. .5

REINFORCING DRESSING: Place equipment at bedside, apply dressing to present dressing for reinforcement, and then remove equipment from area. 2

WOUND IRRIGATION: Place equipment at bedside, remove soiled dressing, irrigate and cleanse site, apply dressing and then remove equipment from area.

Age Group I (less that one year thru 2 years)	3
Age Group II (3 years thru 5 years)	4
Age Group III (6 years thru 11 years)	5
Age Group IV (12 years thru 15 years)	5

SOAKING FEET: Place equipment at bedside, soak feet in solution basin, remove and towel dry foot/feet, and remove equipment from area. 5

SOAKING HAND: Place equipment at bedside, soak hand in solution basin, remove and towel dry hand, and then remove equipment from area. 3

AIR FLOATATION/ALTERNATING PRESSURE MATTRESS - APPLICATION: Place equipment at bedside, apply air floatation or alternating pressure mattress to hospital bed. (Turn patient as appropriate if application is made with patient in the bed.) Remove soiled linens/equipment from area. 2

	SCORE
DEATH CARE: Place equipment at bedside, prepare patient and cover with shroud.	6
SUTURE/SKIN CLIP REMOVAL, < 15: Place equipment at bedside, remove dressing if required, remove sutures or skin clips, and then remove equipment from area.	2
SUTURE/SKIN CLIP REMOVAL, ≥ 15: Place equipment at bedside, remove dressing if required, remove sutures, and then remove equipment from area.	5
SKELETAL/NEUROLOGICAL/EENT	
EYE CARE: Place equipment at bedside, cleanse eyes and apply solution/ointment as prescribed. Apply eye patch and then remove equipment from area.	1
PIN CARE: Place equipment at bedside, cleanse pin site; then remove used equipment from area.	2
BED CRADLE: Place equipment at bedside and position bed cradle over patient.	.5
FOOT BOARD: Place equipment at bedside, position foot board into place and then align and position the extremities.	.5
UROLOGICAL:	
BLADDER TAP: Place equipment at bedside, prepare baby for procedure, assist physician during the procedure, label specimen, return baby to bed, and then remove used equipment from area.	1
CATHETERIZATION - FOLEY: Place equipment at bedside, prepare patient and insert Foley Catheter, inflate balloon, tape catheter in position, connect to urinary drainage bag; then remove used equipment from area.	5
BLADDER IRRIGATION: Place equipment at bedside, set up equipment and irrigate bladder; then remove equipment from area.	1
FOLEY CATHETER CARE: Place equipment at bedside, cleanse area around catheter, apply ointment, and then remove used equipment from area.	1
FOLEY CATHETER REMOVAL: Place equipment at bedside, expose catheter and drainage system, deflate Foley balloon and remove Foley catheter. Measure and record on I&O Record; then remove used equipment from area.	1
CONDOM CATHETER APPLICATION: Upon arrival at bedside, apply condom catheter, connect to a urinary drainage bag; then depart from area.	1
URINARY BLADDER TRAINING: Upon arrival at bedside, clamp/unclamp catheter, record time and urine output if appropriate.	.5
PERINEAL CARE: Place equipment at bedside, prepare and cleanse perineal area (use bedpan with treatment solution or bathe area); then remove equipment from area.	1
PERITONEAL DIALYSIS - INITIATION: Place equipment at bedside, assist physician with procedure as required, then remove equipment from area.	6

SCORE

PERITONEAL DIALYSIS - EXCHANGE OF DIALYSIS SOLUTIONS: Place equipment at bedside, administer dialysis solution, measure output of dialysis solution, record results; then remove used equipment from area. 7

PERITONEAL DIALYSIS - REMOVING DIALYSIS CATHETER: Place equipment at bedside, assist physician with the removal of the dialysis catheter, apply dressing to area; then remove equipment from area. 2

PSYCHOLOGICAL/PATIENT AND FAMILY TEACHING:

TEACHING - BREAST FEEDING: Provide instructions on the technique of breast feeding; observe mother during the feeding process to assess proper technique. 4

TEACHING - BOTTLE FEEDING: Upon arrival at bedside, provide instructions on the technique of bottle feeding; observe mother during the feeding process to assess proper technique. 3

TEACHING - COLOSTOMY CARE: Upon arrival at bedside, provide instructions on the purpose, equipment and technique of colostomy irrigation and colostomy bag care. 3

TEACHING - ILEOSTOMY/ILEOCONDUIT CARE: Upon arrival at bedside, provide instructions on the purpose, equipment and care of the ileostomy or ileoconduit. 4

TEACHING - URINE TESTING: Place equipment at bedside, provide instructions on the purpose and technique of the urine testing. .5

TEACHING - DIABETIC: Upon arrival at bedside, provide information on the disease process and care related to this process. (Signs and symptoms on insulin lack/overdosage, foot care, rotation of injection sites, exercise program, storage of medication, and maintenance of equipment.) 4

TEACHING - INSULIN ADMINISTRATION: Upon arrival at bedside, provide information on dosage, types of insulin, syringe utilization technique, care of equipment, rotation of sites, and specific drug related information. 3

APPENDIX D

Pediatric Patient Classification Tabulation Form

PEDIATRIC PATIENT CLASSIFICATION TABULATION FORM

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 39	<1 - 1	1	
40 - 79	2 - 3	2	
80 - 159	4 - 7	3	
160 - 239	8 - 11	4	
240 - 499	12 - 24	5	

Nursing Unit _____

Date _____

Rater's Signature _____

Patient Care Indicator Scores

Bed No.	Age	Name of Patient	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Medication	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	Skeletal/ Neurological/ EENT	Urological	Psychological/ Patient and Family Teaching	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care

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Continuation Sheet:

Pediatric

Patient Care Indicator Scores

Bed No.	Age	Name of Patient	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Medication	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	Skeletal/ Neurological/ ENT	Urological	Psychological/ Patient and Family Teaching	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care

D-2

APPENDIX E

Methodology for Determining Care Provider Mix for Pediatrics

NURSING CARE HOUR STANDARDS
METHODOLOGY FOR DETERMINING CARE PROVIDER MIX
PEDIATRIC

A. The Percentage Table for Care Provider Mix is a product of Phase II of the Nursing Care Hour Standards Study. During this phase the study team obtained 37,000 on-site measurements at nine medical treatment facilities. These data results were utilized in the development of the personnel percentage table. This percentage table is designed only for use with the Pediatric Classification Tabulation Form.

B. To compute the number of hours of care by provider groups the following steps must be completed.

1. To determine total hours for each patient care indicator complete the next 3 steps.

a. Using the scores from the Pediatric Patient Classification Tabulation Form (AHS 091-10 Test), add the PCISs down the patient care indicator column. The total gives the total PCIS for that patient care indicator.

b. Multiply that total PCIS for the column by 3 to obtain total minutes for the patient care indicator column.

c. Divide the total minutes for each patient care indicator column by 60 to find total hours for each patient care indicator.

PEDIATRIC PATIENT CLASSIFICATION TABULATION FORM

TOTAL POINTS	HOURS OF CARE	CATEGORY OF CARE	NO. OF CASES
1 - 39	<1 - 1	1	
40 - 79	2 - 3	2	1
80 - 159	4 - 7	3	7
160 - 239	8 - 11	4	3
240 - 499	12 - 24	5	

Nursing Unit: Pediatric
Date: 070022 Dec - 070023 Dec
Rater's Signature: CPT Good

Patient Care Indicator Scores

Bed No.	Age	Name of Patient	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Medication	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	Skeletal/ Neurological/ ENT	Urological	Psychological/ Patient and Family Teaching	Therapeutic Activities/ Modalities (Other)	Total PCIS Score	Category of Care
1	01	Patient 1	16.0	40.0	6.0	0	7.5	0	1.0	0	0	0	0	53.0	0	123.5	3
2	01	Patient 2	12.0	26.0	4.0	1.0	11.0	0	7.0	4.0	0	0	1.5	41.0	0	107.5	3
3	01	Patient 3	13.0	39.0	25.0	0	6.5	0	8.0	22.5	0	1.0	1.5	40.0	0	156.5	3
4	01	Patient 4	18.0	39.0	6.0	2.0	7.5	0	1.0	0	0	0	0	53.0	0	126.5	3
5	02	Patient 5	17.0	33.5	32.0	0	7.0	0	11.0	3.0	0	2.0	1.0	97.0	0	153.5	3
6	01	Patient 6	16.0	56.0	28.0	2.0	11.0	0	6.0	20.0	8.0	2.0	1.0	58.0	0	208.0	4
7	01	Patient 7	18.0	28.0	23.0	0	9.0	0	1.0	20.0	0	2.0	1.5	49.0	0	151.5	3
8	01	Patient 8	15.5	5.0	27.0	2.0	5.5	0	0	21.5	0	1.0	1.5	40.0	0	119.0	3
9	01	Patient 9	21.0	50.5	26.0	0.5	7.5	0	0	22.0	2.0	3.0	0	43.0	0	175.5	4
10	02	Patient 10	17.5	30.0	6.0	2.5	95.0	0	0	0	8.0	0	0	33.0	0	182.0	4
11	03	Patient 11	9.0	1.0	6.0	0	7.0	0	5.5	15.5	0	0	4.0	13.5	0	61.5	2
		TOTAL POINTS	168.0	348.0	189.0	10.0	164.5		40.5	127.5	18.0	11.0	12.0	475.5		1564.0	
		TOTAL MINUTES	504.0	1044.0	567.0	30.0	493.5		121.5	382.5	54.0	33.0	36.0	1426.5		4692.0	
		TOTAL HOURS	8.40	17.40	9.45	.50	8.23		2.03	6.38	.90	.55	.60	23.78		78.20	

AHS Form 091-10 (Test)
6 October 1980

EXAMPLE: Patient Care Indicator - Hygiene
a. Add column down for total points = 168 points
b. Multiply total points by 3 - 168 x 3 = 504 minutes
c. Divide total minutes by 60 - 504 ÷ 60 = 8.40 hours

2. To determine hours of care provided by each provider group utilize the total hour score from each patient care indicator located on the Pediatric Patient Classification Tabulation Form (AHS 091-10 Test) and the Pediatric Percentage Table for Care Provider Mix which follows:

PERCENTAGE TABLE FOR CARE PROVIDER MIX

PEDIATRIC

	PROFESSIONAL	TECHNICAL	PARAPROFESSIONAL
HYGIENE	40	43	17
NUTRITION/ ELIMINATION	57	30	13
MOBILITY/ EXERCISE/ SAFETY	57	32	11
MEDICATION	84	15	1
VITAL SIGNS/ ASSESSMENT/ DIAGNOSTIC TEST	62	27	11
GASTROINTESTINAL	84	15	1
RESPIRATORY	76	21	3
CARDIOVASCULAR/ TEMPERATURE REGULATION	87	11	2
SKIN	55	40	5
SKELETAL/ NEUROLOGICAL/ ENT	81	13	6
UROLOGICAL	70	18	12
PSYCHOLOGICAL/ PATIENT AND FAMILY TEACHING	62	30	8
THERAPEUTIC ACTIVITIES/ MODALITIES (OTHER)	67	23	10

Professional =

Registered Professional Nurses (ANC and DAC 7-13)

Technical =

Licensed Vocational/ Technical Nurses (DAC 5-6, 91C10-40 and 91B40)

Paraprofessional =

Nursing Assistants (DAC 3-4 and 91B10-30)

a. Select the total hour score for each patient care indicator.

b. Select the personnel percentage score for each patient care indicator.

c. Multiply the total hour score for each patient care indicator by the appropriate percentage score.

EXAMPLE: Patient Care Indicator - Hygiene

a. Total Hour Score = 8.40
b. Personnel percentage score for patient care indicator =
   Professional 40%
   Technical 43%
   Paraprofessional 17%
c. Multiply total score for PCIS by the personnel percentage score =
   40% x 8.40 = 3.36 hours by professionals
   43% x 8.40 = 3.61 hours by technicians
   17% x 8.40 = 1.43 hours by paraprofessionals

3. To determine total hours of direct care provided by each provider group the following steps must be completed.

a. Add the rows <u>across</u> for the total hours by provider group. This will provide you the total number of hours of direct care by each provider group.

	Hygiene	Nutrition/ Elimination	Mobility/ Exercise/ Safety	Medication	Vital Signs/ Assessment/ Diagnostic Tests	Gastrointestinal	Respiratory	Cardiovascular/ Temperature Regulation	Skin	Skeletal/ Neurological/ PFNT	Urological	Psychological/ Patient and Family Teaching	Therapeutic Activities/ Modalities (Other)	
TOTAL HOURS	8.90	17.40	9.45	.50	8.23	0	2.03	6.38	.90	.55	.60	23.78	0	
PROFESSIONAL	3.36	9.92	5.39	.42	5.10	0	1.54	5.55	.50	.45	.42	14.74	0	=47.39
TECHNICAL	3.61	5.22	3.02	.07	2.22	0	.43	.70	.36	.07	.11	7.14	0	=22.95
PARAPROFESSIONAL	1.43	2.26	1.04	.01	.91	0	.06	.13	.04	.03	.07	1.90	0	= 7.88

EXAMPLE:

<u>Professional</u>

3.36 + 9.92 + 5.39 + .42 + 5.10 + 1.54 + 5.55 + .50
+ .45 + .42 + 14.74 = 47.39 TOTAL HOURS BY PROVIDER GROUP

<u>Technical</u>

3.61 + 5.22 + 3.02 + .07 + 2.22 + .43 + .70 + .36
+ .07 + .11 + 7.14 = 22.95 TOTAL HOURS BY PROVIDER GROUP

<u>Paraprofessional</u>

1.43 + 2.26 + 1.04 + .01 + .91 + .06 + .13 + .04 + .03
+ .07 + 1.90 = 7.88 TOTAL HOURS BY PROVIDER GROUP

b. Divide the total hours for each provider group by 8 (hours/shift) to obtain number and mix of care providers required for direct care activities.

EXAMPLE:

47.39 ÷ 8 = 5.93 Professional mandays of direct care
22.95 ÷ 8 = 2.87 Technical mandays of direct care
7.88 ÷ 8 = .99 Paraprofessional mandays of direct care

4. The investigator recommends that quarterly computations of provider mix will be sufficient.

HCSD Report #81-009 (Part VIII)

Nursing Care Hour Standards Study: Part VIII
Executive Summary

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September 1981

Final Report

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NURSING CARE HOUR STANDARDS STUDY: PART VIII
EXECUTIVE SUMMARY

A. BACKGROUND

A survey conducted within the U.S. Army Medical Department indicated that nurse managers were lacking a method to objectively quantify direct nursing care requirements and the manpower needed to meet these requirements. The Army staffing guides for nursing departments are derived from historical data based upon occupied beds and available staff. The Joint Commission of Accreditation of Hospitals Nursing Service Standard III (1980) indicates that "the Nursing Department shall define, implement, and maintain a system for determining patient requirements for nursing care on the basis of demonstrated patient need, appropriate nursing intervention and priority for care and that specific nursing personnel for each nursing care unit shall be commensurate with the patient care requirements and staff expertise..." However, the current staffing guide does not recognize patients' nursing care requirements. The Professional Services Review Organization which is mandated by PL 92-603 requires documentation of quality nursing care. None of these requirements can be met adequately with the current system, since neither a substantive measure of the workload factor nor an adequate data base for sound quality assessment of services are provided.

B. SIGNIFICANCE OF THE PROBLEM

Health care has changed markedly in the last ten years through the use of increasingly complex technology, growth in specialization, provision of more time-consuming tasks, increased emphasis on health teaching, personalization of services to patients and ongoing evaluation of performance. The impact of these changes has significantly altered the nature, and increased the volume, of the nursing service workload. Departments of nursing, normally the largest manpower consuming service in the hospital, are tasked to provide economical quality nursing care. Managing the quality, quantity, and utilization of personnel to accomplish this goal, however, remains a most persistent, critical, and time-consuming problem. If nursing managers are to make sound administrative decisions, they must measure the appropriate nursing care activities and use the best measuring tool available. The best tool would be an acceptable reference standard, namely, the number of hours of nursing care required to meet safe essential patient care needs with the proper mix by skill level of care providers.

While studies have been conducted on multiple patient classification systems, a valid, reliable, multidimensional, factor-evaluation designed patient classification system which quantifies direct nursing care requirements and staffing mix for a variety of clinical services was not available. In order to correct for these deficiencies, a system must have: (1) quantitative measurement of many different factors, rather than a single, subjective decision based upon limited prototype descriptions of patients; (2) greater sensitivity to patient differences than the current classification systems demonstrate; (3) more comprehensive range of patient needs assessment; (4) a methodology for determining the personnel mix utilizing hours of care within patient care indicators; (5) greater predictive ability; and (6) demonstrate validity and reliability. The study proposed to develop an improved patient classification system which could provide a

better staffing mix based on quantified direct nursing care requirements for critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric inpatient clinical services.

C. STUDY OBJECTIVES

The study was designed to achieve seven objectives:

1. To develop a direct nursing care activities tasking document.

2. To determine minimal essential mean tasking time for frequently occurring direct nursing care activities.

3. To determine the skill level and number of nursing personnel performing the direct nursing care activities.

4. To determine the frequency rate of the direct nursing care activities by documentation of care requirements.

5. To determine categories of care utilizing the documented direct nursing care requirements, minimal essential mean tasking time, and the mean number of nursing personnel required to perform the direct nursing care activity.

6. To develop a factor-evaluation designed patient classification system for critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric clinical services which would provide a better staffing mix based on quantified direct care requirements.

7. To determine if the critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric patient classification subsystems demonstrate validity and reliability.

D. STUDY QUESTION

What effect do age, and sex of patients have on the minimal essential mean tasking time for each direct nursing care activity?

E. RESEARCH PROCEDURES

The methodology utilized was to collect data relevant to the cited objectives.

The Nursing Care Hour Standards Study was conducted in four phases over a period of four years ending in February 1981. Phase One addressed the development of a direct nursing care activities tasking document; Phase Two established the minimal essential mean tasking time for each direct nursing care activity; in Phase Three the nursing activities frequency rate survey provided the documentation of patient needs for direct care; and Phase Four addressed the development and testing of a multidimensional factor-evaluation designed patient classification system for critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric clinical services.

1. Phase One: Development of Direct Nursing Care Activities Tasking Document.

A retrospective clinical record review was conducted; 528 inpatient clinical records were randomly selected from a 500-bed medical treatment facility, covering a six-month period. The record review was limited to the physician order form, standard and special nursing documentation forms and the unit dose pharmacy form. Each direct nursing care activity was tabulated, then plotted on a frequency distribution. An indepth literature review was conducted to determine which direct nursing care activities were considered to be within the framework of nursing practice. The literature review consisted of assessing a minimum of two current nursing reference textbooks and the findings were compared to the initial direct nursing care activities tasking document generated through the retrospective clinical record review. The 357 direct nursing care activities derived were operationally defined to establish specificity; a modified Delphi method was utilized to establish content validity, representativeness, and to make a professional judgment as to the appropriateness of the operationally defined direct nursing care activities. These Delphi studies were conducted utilizing a two-step questionnaire for eliciting the opinion of experts, with revision of the questionnaire between the first and second questionnaire and a feedback report after the second questionnaire. A survey questionnaire was then utilized to determine if the tasking document established during the retrospective clinical record review, literature review, and expert opinion survey was acceptable at the care provider level. All professional nurses within two medical treatment facilities, 200 and 500 inpatient beds respectively, were included within the survey. The data analysis of the 528 inpatient clinical records generated a listing of direct nursing care activities for each inpatient clinical service and established the initial framework for the direct nursing care activities tasking document. Content validity was examined by comparing the direct nursing care activities tasking document with authoritative literature; unanimous agreement was obtained from the professional nurses included within the Delphi studies as to clarity, representativeness of the population, and specificity of the operational definitions. This phase of the study provided a data base for developing a model of direct nursing care activities which could undergo timed measurements.

2. Phase Two: Minimal Essential Mean Tasking Time.

In the second phase the observers were selected and provided standardized training. When observer reliability was demonstrated, the study team conducted on-site observations, utilizing nine acute care medical treatment facilities ranging in size from 50 to 500 inpatient beds. Timed observations were taken across all shifts, seven days a week, over a one-year period, utilizing continous observation with observers "shadowing" nursing personnel.

Timed observations of the 357 direct nursing care activities generated 37,000 timed measurements. These data were analyzed using a one-way analysis of variance with a Scheffé technique to assess differences found between and among facilities. All timed measurements within the 95 percent confidence interval for the mean were utilized in

determining the minimal essential mean tasking time for adult direct nursing care activities, the minimal essential mean tasking time for pediatric direct nursing care activities, and the personnel mix percentage scores for each direct nursing care activity.

Moreover, the results were utilized to identify those direct nursing care activities which most influence total patient care requirements. Groupings of direct nursing care activities were considered to be patient care indicators. The major patient care indicators identified included: (1) hygiene; (2) nutrition/elimination; (3) mobility/exercise/safety; (4) psychological/patient teaching; (5) vital signs/assessment/diagnostic tests; (6) medication; (7) gastrointestinal; (8) respiratory; (9) cardiovascular/temperature regulation; (10) skin; (11) skeletal/neurological/EENT; (12) urological/gynecological; (13) obstetric; (14) psychiatric; and (15) other therapeutic activities/modalities.

3. Phase Three: Direct Nursing Care Activities Frequency Survey.

In Phase Three, direct nursing care activity frequency surveys were conducted in four medical treatment facilities ranging in size from 200 to 500 inpatient beds. Patient needs for direct care were documented by "expert panels" of professional nurses. The expert panel, composed of three to four registered professional nurses with advanced degrees were selected for each of the 720 rated inpatients. The care requirements were determined retrospectively to capture all of the nursing care requirements for the 24-hour time frame.

Documented care requirements were displayed to demonstrate the frequency distribution of each direct nursing care activity for a 24-hour time frame for the following clinical services: (1) critical care and medical/surgical; (2) obstetric; (3) psychiatric; and (4) neonatal and pediatric. In determining the hours of direct nursing care required for different groups of patients, the documented direct care requirements were utilized in conjunction with the appropriate minimal essential mean tasking time and the mean number of personnel required to perform direct nursing care activities. The categories of care were established by calculating the total hours of care for each of the 720 cases, and then plotting these findings by hours of care required. The distribution of data was then analyzed for groupings of cases. Categories of care were determined and boundaries defined. The following category scheme resulted:

Category 1 = <1 thru 1 hour
Category 2 = 2 thru 3 hours
Category 3 = 4 thru 7 hours
Category 4 = 8 thru 11 hours
Category 5 = 12 thru 24 hours
Category 6 = 25 thru 36+ hours

Patients were categorized into six groups; however, each patient classification instrument contained no more than five categories, since fewer categories permitted too large a variance within each category.

4. Phase Four: Patient Classification System.

Phase Four addressed the development of a multidimensional factor-evaluation designed patient classification system. The patient classification system consisted of six subsystems: (a) critical care; (b) medical/surgical; (c) obstetric; (d) psychiatric; (e) neonatal; and (f) pediatric. Each subsystem was comprised of five components: 1) patient classification instrument mathematical model; 2) patient classification instrument; 3) patient classification instrument instructional information; 4) patient classification tabulation form; and 5) methodology for determining care provider mix. The methodology for the development of each component is discussed below.

4.1 Patient Classification Instrument Mathematical Model. The mathematical models for the patient classification instruments were designed for either an automated or manual system. The model delineates the direct nursing care activities, frequency rate for a 24-hour time frame, mean time, and the appropriate weighted score. The organization of the model displays dimensions of direct patient care and direct nursing care activities within each dimension labeled as patient care indicator.

4.2 Patient Classification Instrument. The six instruments developed are factor-evaluation designed instruments with 12 or 13 patient care indicators. This type of design allows for the identification of direct nursing care activities for each patient care indicator. A unique characteristic of this classification scheme is its objectivity as each patient is retrospectively classified on the assessment of his/her needs for nursing care, and then calculated by totaling the patient care indicator scores (PCIS) relevant to the individual patient. Therefore, the patient is not inappropriately assigned to a single category, but the needs are identified for each patient care indicator. Most importantly, these instruments were designed to minimize subjective classification as all direct nursing care activities included on the instrument are mutually exclusive. Age was considered to influence the minimal essential mean tasking time significantly; therefore, the neonatal and pediatric classification instruments are designed for use only with the appropriate pediatric inpatient population. The following patient classification instruments were developed:

Instruments	Category Scale	Hours of Care for 24 Hours
Critical Care	2-6	2 thru 36+ hours
Medical/Surgical	1-5	< 1 thru 24 hours
Obstetric	1-5	< 1 thru 24 hours
Psychiatric	1-5	< 1 thru 24 hours
Neonatal	1-5	< 1 thru 24 hours
Pediatric	1-5	< 1 thru 24 hours

4.3 Patient Classification Instrument Instructional Information. The Patient Classification Instrument Instructional Information components were developed to assist the user to consistently apply the same methodology when rating patients' direct care requirements. The organization of the operational definitions and weighted score for each direct nursing care activity follows the same format as the mathematical models and patient

classification instruments. The instruments allow for assessment of infrequently occurring direct nursing care activities which impact significantly on nursing workload, and each of these direct nursing care activities are included as additional direct nursing care activities that can be included in the rating under "other therapeutic activities/ modalities."

4.4 Patient Classification Tabluation Form. Tabulation forms are designed for the recording of summary data. After the assessment of direct nursing care requirements have been completed by the professional nurse, the unit clerk can use the patient classification tabulation form to record the patient care indicator scores for each patient. The data accumulated to this point will provide the necessary information for determining the category of care and the hours of care within each patient care indicator for the clinical unit. Extensive analyses were utilized to design the tabulation form. The analysis demonstrated that the distribution of hours of care within each patient care indicator and not the category of care determines the mix by skill level of care providers required to meet the rated direct nursing care requirements for variable groups of inpatients. It must be emphasized that both category of care and hours of care within each patient care indicator can determine man-hour requirements, but only the hours of care within each patient care indicator can determine the best mix by skill level of nursing care providers.

4.5 Methodology for Determining Care Provider Mix. The methodology was developed for the purpose of providing the best mix by skill level of care providers. The diversity of direct nursing care activities requires a more complex mix of personnel; therefore, more sophisticated techniques are required to assess these requirements. Previous patient classification systems matched category of care with mix of personnel. In Phase Two of the study the observers recorded the actual number and skill level of care providers for each direct nursing care activity. These personnel mix percentage scores for each direct nursing care activity were derived from recorded observations. Percentages for care provider mix were developed from the personnel percentages for each direct nursing care activity within each patient care indicator. The mix by skill level of care providers can easily be determined by utilizing the summary data from the patient classification tabulation form and the appropriate percentage table for care provider mix. It must be noted that patient classification systems that match category of care with mix of personnel make the major assumption that all patients in the same category of care have the same direct nursing care requirements; hence, the same mix of personnel can meet those care requirements. Present findings demonstrate that the hour of care within each patient care indicator was the determinant for the mix by skill level of care providers and not the category of care. Therefore, the present findings do not support this assumption.

F. DATA ANALYSIS AND FINDINGS

Extensive validity and reliability estimates were computed for the patient classification system. Validity studies were conducted to determine if the patient classification instruments demonstrated content-related and

criterion-related validity. Professional nursing judgment was involved in the original design of the patient classification instruments and was again required for validation of the content of the instrument. Having completed the content-related validation testing, correlation coefficients were computed to determine the relationship of documented direct nursing care requirements with the patient classification instruments. Correlation coefficients for direct nursing care requirements with instrument mathematical models for two independent testing periods ranged from $r = .98$ to $r = .99$ for both the computer and weighted-factor mathematical model. Observational studies were conducted to determine the relationship of the patient classification instruments to the actual observed and timed measurements of direct nursing care activities. The criterion-related validity coefficients for: (1) critical care and medical/surgical; (2) obstetric; (3) psychiatric; and (4) neonatal and pediatric instruments ranged from $r = .87$ to $r = .99$.

Reliability studies were conducted to determine: (1) if the patient classification instruments demonstrated statistically significant inter-rater reliability, two sets of ratings, one for total score and one for category of care, were obtained from the assessment of each of the 8350 inpatients by two independent trained raters representing four medical treatment facilities. Data were analyzed using Pearson's correlation coefficient with a resultant reliability coefficient for total score and category of care. Correlation coefficients for total score were: critical care = .91; medical/surgical = .85; obstetric = .95; psychiatric = .93; neonatal = .91; and pediatric = .91. Concurrently, the category of care correlation coefficients were: critical care = .90; medical/surgical = .82; obstetric = .88; psychiatric = .83; neonatal = .87; and pediatric = .85. All coefficients for total score and category of care were statistically significant ($p < .001$). To establish internal consistency two independent raters' patient care indicator scores were analyzed to determine if the individual responses to the various patient care indicators were consistent. Correlation coefficients were used to indicate the degree to which variation in the patient care indicator scores for rater one was related to variation in the patient care indicator scores for rater two. Significance tests for each coefficient were performed using Student's t with N-2 degrees of freedom. Of the coefficients computed for rater one versus rater two scores across all six instruments, 298 of 319 coefficients (93%) achieved significance at the .05 level or better.

G. CONCLUSIONS

A quantitative patient classification system has been developed and tested that measures direct nursing care activities and determines the best mix by skill level of care providers for critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric clinical services. The patient classification system utilizes the factor-evaluation design, is multidimensional, and is designed for automated or manual inplementation. The frequency of data collection can be determined to establish a statistically significant sample size, yet minimize data collection time and effort. The patient classification system has been shown to be valid and reliable. The major advantages of this system are: (1) provides a uniform and consistent way to assess direct nursing care activities within critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric

clinical inpatient units (that is, data are systematized, standardized, and detailed, increasing the usefulness of the patient classification system); (2) identifies the appropriate staffing mix by skill level of care providers for the best utilization of available personnel, and generates the data base for predicting categories of care and mix by skill level of care providers; (3) adaptability to an automated format that eliminates all manual calculations as the professional nurse needs only to assess the direct nursing care activities by scoring the appropriate frequency rate for the 24-hour period; (4) lends itself to easily being updated as direct nursing care activities can be added or deleted as the scope of practice changes, as each of the direct nursing care activities are mutually exclusive; (5) lends itself to easily being audited, as the rating procedure is simple and it can easily be assured that patients are being properly classified; (6) designed to meet Joint Commission on Accreditation of Hospitals (JCAH) Nursing Service Standard III (1980); and (7) provides a daily 24-hour retrospective assessment that can be used to establish patient care requirements and mix by skill level of care providers required to meet these needs.

H. IMPLICATIONS

Based upon an extensive literature review and the findings from this study it has been determined that the currently available patient classification systems do not adequately quantify the direct nursing care requirements for critical care, medical/surgical, obstetric, psychiatric, neonatal and pediatric clinical services. Patients within the same category of care have different direct nursing care requirements; hence, a different mix of care providers are required to meet these needs. Study findings also show that the hours of care within each patient care indicator is the best determinant for defining the proper care provider mix. The Patient Classificaion System must be subjected to long-term evaluative studies on the utilization of the automated and manual systesms. Furthermore, in order for nursing managers to fully quantify overall nursing care requirements, a methodology for determining the indirect care requirements must also be developed and subjected to extensive validity and reliability studies utilizing multiple medical treatment facilities.

The data generated during the Nursing Care Hour Standards Study have been applied to existing systems within the Army Medical Department. The Patient Classification System was designed to interface with the Uniform Chart of Accounts Personnel Utilization System (UCAPERS) which will provide nursing managers with the personnel cost for each inpatient clinical service. The data were integrated into the manpower authorization criteria for determining personnel requirements for field medical treatment facilities and in the development of Training Support Document FM 8-23 Patient Play and Exercises.

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