

Peritoneal Activity Staffing Levels (PASL): One Approach to Desirable Nurse/Patient Care Ratios

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In its various forms, peritoneal dialysis has dramatically increased as a modality of choice for ESRD patients. Concurrent with PD acceptance and patient growth, we have seen a substantial increase in the number of facilities offering PD nationwide.¹ As each program evolved, staff responsibilities varied to meet patient and family needs. Unlike procedures used in hemodialysis, PD nurses find their roles widely interchangeable within a number of different settings. Hemodialysis nurse programs operate within the confines of a more defined job description. Hemodialysis has established acceptable patient/nurse ratios dependent upon the type of unit (i.e., acute, chronic). Already, work has been done to address the issue of short-term, high-flux dialysis and its effect on "safe" staff levels.²⁻⁴ A random, national survey of 150 PD programs from a variety of settings demonstrated PD nurse responsibility from unit to unit as varied as nurse/patient ratios. Realizing that no two programs are or should be identical, a tool that assists with the establishment of desirable nurse/patient ratios (regardless of the type of PD program) was developed, called Peritoneal Activity Staffing Levels (PASL). PASL criteria include: patient population, acuity, care of hospitalized patients, availability of support staff, cross-program coverage (i.e., hemodialysis), transient patient care, management support, community responsibilities, etc. Utilization of this tool is not intended to eliminate or standardize varied responsibilities of the PD nursing staff, but to assist in the establishment of desirable nurse/patient ratios within varied settings. In turn, this will prevent nurse burnout and allow programs to achieve maximum growth.

Interaction over the years with nursing personnel from other peritoneal dialysis (PD) programs has led us to believe that wide variations in nursing responsibilities as well as in staff/patient ratios exist. A review of today's literature failed to uncover acceptable staffing criteria for home PD programs that took into account individual program characteristics.

It seemed apparent that a concise, easy-to-use staffing tool based on individual program characteristics, nursing responsibilities, and patient acuity would assist programs in defining desirable staffing levels. In turn, this would enable programs to achieve and maintain maximum growth, optimize patient care, and enhance nurse retention.

Based on statistics tabulated in the *University of Michigan National CAPD Survey*, the staffing tool PASL was developed.

TOOL DEVELOPMENT

PASL (*Figure 1*) was developed using a point system that would enable programs to account for patient population, acuity level of patient base, and additional responsibilities required of the PD nurse. It was determined that one point would correspond to 1.5 hours of nursing time. Based on the national survey, 1.5 hours/week was identified as the amount of time necessary to provide care to each home PD patient after training had been completed. A total of 25 points is equal to one full-time equivalent (FTE). Sick/vacation relief (2.4 hours/week) has been allocated for each FTE. To use PASL, a program would assign one point for each patient (*Figure 1, #1*). The survey also indicated that diabetic, pediatric, and geriatric patients require additional nursing time. In order to appropriately-account for these special patients, additional points must be assigned (*Figure 1, #2, A-C*). In order to appropriately determine the *average* amount of time spent by the PD nurse in

1. Patient population (one point/patient)	= _____ points
2. Patient acuity	
A. Diabetic: Number of patients _____	x 0.4 = _____ points
B. Pediatric: Number of patients _____	x 0.4 = _____ points
C. Geriatric: Number of patients _____	x 0.4 = _____ points
3. Based on a unit time study , determine the average time spent by all primary care peritoneal nurses on duties in the following categories:	
A. PD pretraining, training, retraining	Hours/week _____ / 1.5 = _____ points
B. PD inpatient support	Hours/week _____ / 1.5 = _____ points
C. Hemodialysis support	Hours/week _____ / 1.5 = _____ points
D. Transient patient care	Hours/week _____ / 1.5 = _____ points
E. Secretarial support	Hours/week _____ / 1.5 = _____ points
F. Administrative support	Hours/week _____ / 1.5 = _____ points
G. Other duties performed on a regular, recurring basis	Hours/week _____ / 1.5 = _____ points
4. Total points _____ / 25 = _____	nursing FTEs.

Figure 1: Determining peritoneal activity staffing levels (PASL).

additional categories, a unit time-study should be completed. All nurses responsible for direct patient care within the home PD program would keep a diary of how their time is spent in an average week (Figure 2). Some examples of the various nursing responsibilities to be accounted for in each category are included on our time-study form.

At the completion of the time study, the hours per week spent by all nurses are totaled within each category and recorded. Points are determined by dividing the amount of time spent by 1.5 (Figure 1, #3, A-G). The total points (sum of #1, #2, and #3) are divided by 25 to identify desired nursing FTEs in a program (Figure 1, #4). As programs approach maximum points (25 per nursing FTE), it is important to keep in mind that reallocation of either nursing duties (as identified in Figure 1, #3, A-G) or pursuit of additional nursing hours should be considered. A cushion or gray zone (Figure 3) should be allowed. Pursuing additional nursing hours when a program's total points fall within a gray zone will allow orientation and training time for new personnel without compromising a program's potential to achieve maximum growth.

A concise, easy-to-use staffing tool based on individual program characteristics, nursing responsibilities, and patient acuity would assist in defining desirable staffing levels.

TOOL EVALUATION

While attending an advanced PD seminar in March 1988, nursing colleagues were asked to evaluate the effectiveness of PASL. Nurses representing 29 different PD programs were included in the evaluation. Of the programs represented, 41% were hospital facilities, 7% were university centers, and 52% were located in freestanding settings. Nurses' PD experience ranged from one year to 11 years, with the mean amount of time within peritoneal dialysis being 3.2 years.

Job titles of the nurses varied: 24% were head nurses of their programs, 45% were staff nurses, and 31% were nurses with other classifications (i.e., clinical coordinator, nurse manager, educational coordinator, etc.). Patient population of

programs represented in the evaluation of PASL varied (Table 1).

To evaluate PASL, nurses were asked to assign points based on patient population and acuity levels as previously described. With the realization that many of the nurses would not have current information in relation to their program's unit time-study, they were asked to estimate the time spent by all nurses in an average week within their program in the various nursing responsibility categories. To conclude the evaluation, nurses were asked to identify their program's present nursing complement and to state if this represented desirable staffing. They were also asked if additional nursing or ancillary support staff had been sought for their program at any time in the past and had been denied. Lastly, they were asked if PASL would be useful to them in their program. By comparing these answers to nursing FTEs identified as desirable through the use of PASL, the following were noted:

- Nurses from 41% of the programs stated that they were inadequately

staffed, which was consistent with

Table 1: Unit patient population.

Number of patients	Number of units
<10	5 (17.2%)
10-20	8 (27.5%)
21-30	3 (10.3%)
31-40	2 (6.9%)
41-50	5 (17.2%)
51-60	1 (3.4%)
61-70	2 (6.9%)
71-80	2 (6.9%)
81-90	0
91-100	0
100 +	1 (3.4%)

PASL;

- 7% stated that they were inadequately staffed, yet PASL reflected adequate staffing;
- 26% stated that they were presently adequately staffed and PASL reflected the same staffing requirement; and
- Nurses from 26% of the programs stated that their staffing was adequate, yet PASL identified that additional nursing FTEs would be desirable.

Categories	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Pretraining, training, retraining Direct patient/family training Orientation to modalities Home visits Initial paperwork (long- and short-term care plan, Kardex, vendor prescription, etc.)						
Inpatient support APD system setup Initiation/discontinuing Tx. CAPD procedures (tubing changes, solution exchange, etc.) Inservice support of hospital staff						
Hemodialysis support Hemodialysis treatments (in- and outpatient) Backup support for hemodialysis Staff						
Transient patient care All services provided to PD patients not included in permanent population						
Secretarial support Typing Answering phones (not related to direct patient-care) Charting lab work Arranging patient appointments						
Administrative support Policy and procedure writing Administrative meetings Training and orientation manuals Audits						
Other Assisting with medical procedures (catheter placements/removals) In-hospital patient-care meetings Community awareness projects						

Figure 2: PD unit time study.

In review of these particular programs' evaluations of PASL, it was noted in the last point above that a misunderstanding could have existed in point assignment. Without the use of an actual unit time-study, hours inappropriately allocated (i.e., 49 hours had been identified as required for hemodialysis support in a program with one FTE, 60 hours of training time and 40 hours of secretarial support had been allocated in a program population of 17, etc.). In addition, two programs identified the number of high-acuity patients to be greater than the total program population.

Ultimately, PASL reflected desirable staffing that was consistent with the nurse's opinion in 67% of the cases. Nurses from 16 programs (55%) had pursued additional nursing or ancillary staff at some point in the past and had been denied the requested additional position. Overall, 26 nurses (89.6%) felt that the use of PASL would be beneficial in their program. One nurse (3.4%) thought PASL "may be" useful, one nurse (3.4%) stated "not at this time," and one nurse (3.4%) did not think

PASL would be useful in her program.

CONCLUSION

The use of PASL is not intended to standardize nursing responsibilities or nurse/patient ratios within home PD programs. The use of this tool will:

- Identify desirable staffing levels based on individual program characteristics;
- Justify the need for existing nursing and ancillary support;
- Defer the need for additional nursing FTEs by identifying categories in which the points may be reduced (i.e., decrease inpatient and hemodialysis support, or increase secretarial and administrative support);
- Provide concrete data to pursue additional nursing or ancillary support;
- Promote staff retention;
- Optimize the ability to deliver patient care; and
- Enhance the program's potential to Achieve and maintain maximum growth.

Acknowledgments. We wish to express our sincere gratitude to the many nurses who took part in the initial questionnaire and to those nurses who assisted us in testing the tool. Thank you.

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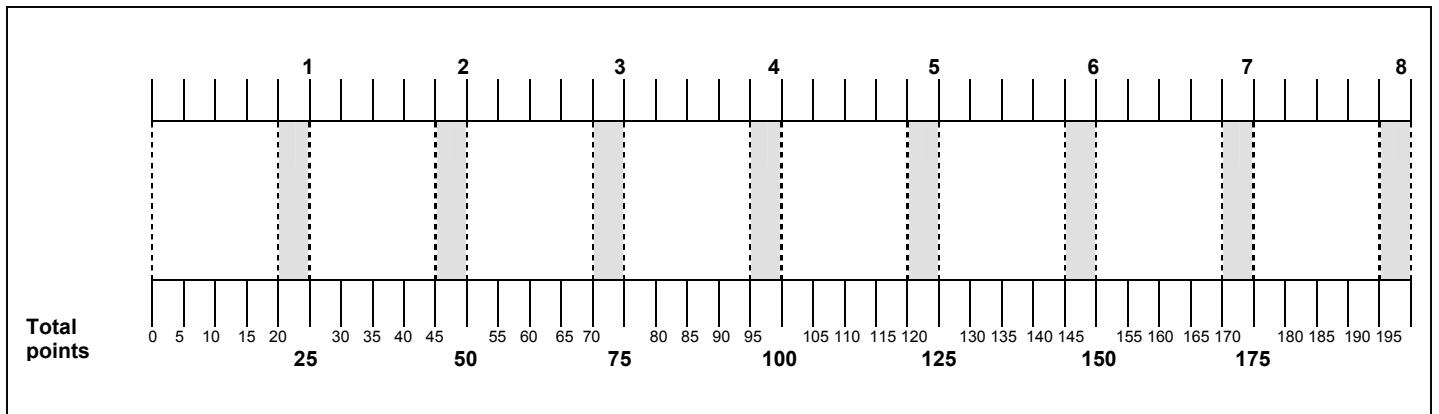


Figure 3: Nursing FTEs (Gray zone denotes time at which review and evaluation of point distribution should occur: Re-distribute points among PASL categories and pursue additional nursing FTEs.