HOW THE TABLES WERE CONSTRUCTED

All of the tables and graphs presented in *Nursing Home Statistical Yearbook, 2015* were constructed using administrative data from the Centers for Medicare and Medicaid Services. With the exception of Table 1-V, the source of all the tables and graphs is the Certification and Survey Provider Enhanced Reporting (CASPER) database as of December 9, 2015. CASPER replaced the Online Survey Certification and Reporting (OSCAR) system in mid-2012 so *Nursing Home Statistical Yearbook, 2013* was the first CASPER-based volume in the *Nursing Home Statistical Yearbook* series. We are very confident in the longitudinal integrity of the data over the transition from OSCAR to CASPER, and the underlying data "crosswalk" we developed in the conversion process.

We did, however, find that some of the "backfilling" subroutines that we developed for the OSCAR-based tables did not work as well constructing CASPER-based tables. Backfilling is a technique routinely used to maximize the research utility of administrative data. Fields containing data suspected of being inaccurate are overwritten (backfilled) with more likely values. The backfilling subroutines that we developed for use with OSCAR were insufficiently aggressive when applied to CASPER, i.e., we did not backfill enough. We revised three tables in Section V of *Nursing Home Statistical Yearbook, 2013* to reflect the more aggressive backfilling methodology used in *Nursing Home Statistical Yearbooks, 2014 and 2015*. The Section V revision to the 2013 book is published at www.longtermcareinfo.com/errata2013a.html.

SECTION I: RESIDENT ACUITY

The Section I tables report various measures of "resident acuity" (sometimes called "case-mix", "resource need", or "resource intensity"). These resident acuity measures are based on the Minimum Data Set and resident characteristics captured by CASPER from CMS Form 672 (http://www.longtermcareinfo.com/forms/hcfa672.pdf).

Table I-1

Table I-1 combines resident characteristics into four acuity indexes, each representing a different measure of relative resource intensity needed to care for residents. Historically, survey-based measures of resident acuity have been done using a number of slightly different methods, all of which link deficits in activities of daily living (ADLs) to resource need.

The variable "PROPAC", so named because the Prospective Payment Assessment Commission used it in their 1992 Report to Congress entitled *Medicare's Skilled Nursing Facility Payment Reform*, is based on the "Management Minutes" system developed by Thoms in 1975[1], which assigns weights to nine discrete care-giving activities and characteristics of patients. The weights in Thoms' system were developed using time and motion studies, and theoretically represent the actual minutes of care required on a daily basis for patients requiring specific procedures or with certain levels of functional deficits. PROPAC is calculated as the sum of the products of nine specific patient characteristics and their associated weights. This method of calculating acuity was

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[1] Thoms, W. , 1975. "Proposed Criteria for Long Term Care Quality and Cost Containment Systems," Unpublished paper. Greenbriar Terrace Nursing Home, Nashua, New Hampshire.

used by Dor in 1989[2], Cohen and Dubay in 1990[3], and the West Virginia Medicaid program. The nine specific patient characteristics and weights that determine the PROPAC acuity score are shown below.

Derivation of PROPAC

#	Weight	Description of Variable
1	46	Proportion of bedfast residents. [bedfast all or most of time / total residents]
2	32	Proportion of residents needing assistance with ambulation. [(chairbound + physically restrained + contractures) / total residents]
3	45	Proportion of residents needing full eating assistance. [eating dependent / total residents]
4	20	Proportion of requiring the assistance of one or two staff with eating. [eating with assistance of one or two staff / total residents]
5	20	Proportion of residents with indwelling or external catheters. [catheter / total residents]
6	48	Proportion of residents who are incontinent. [(bowel incontinent + bladder incontinent) / total residents]
7	20	Proportion of residents with decubitus ulcers. [with pressure sores / total residents]
8	26	Proportion of residents receiving bowel or bladder training. [(bowel training + bladder training) / total residents]
9	10	Proportion of residents receiving preventative skin care. [preventative skin care / total residents]

However, because the PROPAC weights were developed prior to the enactment of the Omnibus Budget Reconciliation Act of 1987 (OBRA), they may not reflect the relative resource needs of post-OBRA period residents as accurately as possible.

"ADLINDEX" and "ACUINDEX" are newer acuity measures that were developed in conjunction with a research project examining quality of care issues in nursing homes. They are based on work done as part of the minimum data set development for resident assessment. An ADL index (ADLINDEX) is added to a special treatments index (STINDEX) to obtain an acuity index (ACUINDEX). ADLINDEX is derived as the sum of specific resident characteristics and their associated weights as follows.

Derivation of ADLINDEX

ADLINDEX =
  [proportion of residents totally dependent at eating × 3]
  + [proportion of residents requiring the assistance of one or two staff with eating × 2]
  + [proportion of residents who are either independent or require supervision eating]
  + [proportion of residents totally dependent at toileting × 5]

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[2] Dor, A. , 1989. "The Costs of Medicare Patients in Nursing Homes in the United States. " *Journal of Health Economics*. 8(3):253-70.
[3] Cohen, J. , and Dubay, L. , 1990. "The Effects of Medicaid Reimbursement Method and Ownership on Nursing Home Costs, Case Mix, and Staffing." *Inquiry*. 27:183-200.

+ [proportion of residents requiring the assistance of one or two staff with toileting × 3]
+ [proportion of residents independent or requiring supervision with toileting]
+ [proportion of residents totally dependent at transferring × 5]
+ [proportion of residents requiring the assistance of one-two staff with transferring × 3]
+ [proportion of residents independent or requiring supervision with transferring]
+ [proportion of residents who are bedfast × 5]
+ [proportion of residents who are chairbound × 3]
+ [proportion of residents who are ambulatory]

ACUINDEX is the sum of ADLINDEX and STINDEX, where STINDEX is defined as follows.

Derivation of STINDEX

STINDEX =
[proportion of residents receiving respiratory care]
+ [proportion of residents receiving suctioning]
+ [proportion of residents receiving intravenous therapy]
+ [proportion of residents receiving tracheostomy care]
+ [proportion of residents receiving parenteral feeding]

ADLSCORE is a measure of the average number of ADL dependencies. It is based on ranking the five ADLs (bathing, dressing, toileting, transferring, and eating) with respect to the typical order in which independence is lost. The residents dependent at eating are assumed dependent at all five ADLs. Similarly, the residents requiring no assistance with bathing are assumed to have no ADL limitations. The percentage of residents with one, two, three, and four ADL limitations are calculated as the difference between the intermediate ADLs. The inherent order in which residents are assumed to lose ADLs is bathing, dressing, toileting, transferring, and eating.

All of the averages presented in Table I-1 are weighted, i. e., the resident characteristics are summed by state and then the acuity values were computed from the totals.

Table I-2

Table I-2 breaks out the acuity measure ACUINDEX from Table I-1 by state and class of ownership. As in Table I-1, the averages reported in Table I-2 are weighted (by the number of residents).

Table I-3

Similarly, Table I-3 shows ACUINDEX by state and urban/rural designation. A facility within the boundary of a Metropolitan Statistical Area (MSA) is considered urban, otherwise rural. Averages are weighted.

Table I-4

Table I-4 reports ACUINDEX by state and size category. Averages are weighted.

Table I-5

The two acuity measures reported on Table I-5 are computed from the expected staffing values used on CMS's Nursing Home Compare web site and are derived from the Minimum Data Set. The expected staffing values are based on the distribution of residents by Resource Utilization Group (RUG-III) in the quarter closest to the date of the most recent standard survey. Using the 53 group version of RUG-III, expected staffing hours are calculated by summing the nursing times from a CMS time study[4] for each group across all residents and categories. Expected staff time represents the minimum staff time below which residents are at substantially higher risk of quality problems.

On the Nursing Home Compare web site the ratio of expected staffing to actual staffing is used as a component of the 5-Star quality rating system. For the purposes of this table, however, we are only concerned with the expected staffing values, which we use as a proxy for resident acuity. Case Mix Index Total represents expected total nursing hours per resident day (RN +LPN + nurse aide) and Case Mix Index Skilled represents RN hours per resident day. In both cases each value is divided by the national average so that a case mix index of 1.00 represents average resident acuity.

SECTION II: RESIDENT ADL CHARACTERISTICS

Table II-1

Table II-1 reports the average percentage of residents nationally and by state who are dependent in each of five ADLs. All residents not categorized as "independent" in each ADL are re-categorized as "dependent" for the purposes of Table II-1. Averages are weighted.

Table II-2

Table II-2 breaks out the degree to which nursing home residents are dependent at bathing by state. The process of bathing is defined to exclude back washing and the shampooing of hair. It includes full-body bath/shower, sponge bath, and transfer into and out of tub or shower. If a facility routinely provides "set up" assistance to all residents, such as drawing water for a tub bath or laying out bathing materials, and a resident requires no other assistance beyond set up, then they are categorized as "independent". Averages are weighted.

Table II-3

Table II-3 breaks out dressing dependencies by state. Dressing is defined as how the resident puts on, fastens, and takes off all items of street clothing, including donning or removing prosthetic devices such as a brace or artificial limb. If a facility routinely sets out clothes for all residents, and this is the only assistance the resident receives, the resident is counted as "independent". However, if a resident receives assistance with donning a brace, elastic stocking,

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[4] Kramer AM, Fish R. "The Relationship Between Nurse Staffing Levels and the Quality of Nursing Home Care." Chapter 2 in Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes: Phase II Final Report. Abt Associates, Inc. Winter 2001.

a prosthesis and so on, the resident is counted as needing the assistance of one or two staff. Averages are weighted.

Table II-4

Table II-4 reports ADL dependence information specific to toileting, which is defined as how the resident uses the toilet room (or bedpan, bedside commode, or urinal). It includes transferring on and off toilet, cleansing, adjusting clothing, and so on. If all that is done for the resident is to open a package, the resident is counted as "independent". Averages are weighted.

Table II-5

Table II-5 reports transferring dependence levels by state. Transferring is defined as how the resident moves between surfaces, such as to and from the bed, chair, wheelchair or to and from a standing position. It excludes transfers to and from the bath or toilet. If the facility routinely provides "set up" assistance to all residents such as handing the equipment (e.g., sliding board) to the resident, and this is the only assistance required, the resident is counted as "independent". Averages are weighted.

Table II-6

Table II-6 shows eating dependence by state. Eating is defined as how a resident eats and drinks regardless of skill. If the facility routinely provides "set up" activities, such as opening containers, buttering bread, and organizing the tray, and this is the only assistance provided, the resident is categorized as "independent". Averages are weighted.

Table II-7

Table II-7 reports the percentage of residents by state with one, two, three, four, and five ADL dependencies. Residents who are independent at bathing are assumed to be independent at all 5 ADLs. Similarly, residents who are dependent at eating are assumed to be dependent at all 5 ADLs. See the description of ADLSCORE above.

Table II-8

Table II-8 reports the percent of residents with urinary catheters, the percent of those with catheters who had them on admission, the percent of residents who are bladder or bowel incontinent, and the percentage of residents on bladder or bowel training programs. Catheter use includes both internal and external. "Bladder Incontinence" refers to those occasionally or frequently incontinent of bladder, defined as those who have an incontinent episode two or more times per week. Residents with catheters are not included in this category. "Bowel Incontinence" refers to those residents who are occasionally or frequently incontinent of bowel, defined as residents who have a loss of bowel control one or more times per week. "Bladder Training Program" represents the percentage of residents on individually written bladder training programs, i. e., detailed plan of care to assist the resident to gain and maintain bladder control. The plan of care must be consistently implemented. These include all residents on training programs including those who are incontinent or with catheters. Similarly, "Bowel Training Program" is defined as the percentage of residents on individually written bowel training programs. Averages are weighted.

Table II-9

Resident mobility characteristics by state are reported in Table II-9. "Bedfast" describes residents who were in bed or recliner 22 hours or more per day in a seven-day period and includes bedfast with bathroom privileges. "Chairbound" refers to those who depend on a chair for mobility, and include those residents who can stand with assistance to pivot from bed to wheelchair. Residents categorized as chair bound cannot take steps without extensive or constant weight-bearing support from others. "Ambulatory" residents are independently ambulatory, requiring no help or oversight, or help or oversight was provided only one or two times during a seven-day period. "Ambulation w/Assistance" refers to residents who required oversight, cueing, or physical assistance or who used a cane, walker, crutch, leg splints, braces, or orthotics. "Independent" means no help or oversight, or help was provided only one or two times in a seven-day period. Averages are weighted

Table II-10

The first column of Table II-10 reports the percentage of residents with contractures, which includes residents having a restriction of full range of motion of any joint due to deformity, disuse, pain, etc. , and includes loss of range of motion in fingers, wrists, elbows, shoulders, hips, knees and ankles. The next column is the number of residents who had contractures on admission expressed as a percent of the total number of residents with contractures. The next column reports the percent of residents who are physically restrained, defined as residents whose freedom of movement and/or normal access to their own body is restricted by any manual method or physical or mechanical device, material or equipment that is attached or adjacent to his/her body and cannot be easily removed by the resident. The last column reports the number of residents who had orders for restraints upon admission expressed as a percent of the total number of residents physically restrained. Averages are weighted.

SECTION III: OTHER RESIDENT CHARACTERISTICS

Table III-1

Table III-1 reports the use of psychoactive medications by state. The first column represents the percent of residents who receive any psychoactive drug, which includes antipsychotics, antianxiety medications, antidepressants, and hypnotics. The remaining columns break out psychoactive medication use by specific categories. Averages are weighted.

Table III-2

Table III-2 provides information about interstate variation in other medications-related variables in nursing homes. The first column is the percentage of residents receiving antibiotics, for either prophylaxis or treatment. "% Pain Management" describes the percent of residents with specific pain control plans, which includes self-medication pumps or regularly scheduled administration of medications. "% IV Therapy/Feed" is the percent of residents receiving fluids, medications, and/or nutritional requirements intravenously. The next two columns report the percent of residents who received an influenza immunization within the last 12 months, and the percent of residents who received the pneumococcal vaccine. The drug error rates are calculated by the survey team on a facility wide "medications pass" basis, where the denominator is the number of

opportunities for medication errors that were evaluated during the medications pass, and the numerator is the number of times that the survey team observing medications pass determined that a drug order was administered differently than written. All of the averages reported in Table III- 2 are weighted by the number of residents except the medication error rate, which is unweighted, i.e., each facility in the state contributes equally to the average, regardless of the number of residents in the facility.

Table III-3

Table III-3 reports skin care characteristics by state. The first column is the percentage of residents who have pressure sores, defined as ischemic ulcerations and/or necrosis of tissues overlaying a bony prominence, and exclude Stage I sores. The next column, nosocomial pressure sore rate, reports the percentage of residents who developed bedsores after admission, calculated as "total bed-sores" less "with bedsores on admission" divided by the total number of residents in the facility. The last two columns are the percent of residents receiving special skin care, defined as non-routine skin care provided according to a physician's order (or in care plan) and the percent with rashes. Averages are weighted.

Table III-4

The percentage of residents receiving special treatments is reported on Table III-4. "Trach Care" refers to tracheostomy care and includes residents receiving care involved in maintenance of the airway, the stoma and surrounding skin, and dressings/coverings for the stoma. "Suctioning" includes those who require use of a mechanical device that provides suction to remove secretions from the respiratory tract via the mouth, nasal passage, or tracheostomy stoma. "Rehab Services" is defined as residents receiving care provided by, or under the direction of, a rehabilitation professional (physical therapist, occupational therapist, speech-language pathologist, or psychiatrist) and designed to improve functional ability. It excludes health rehabilitation for MI/MR. "Ostomy Care" includes residents receiving care for a colostomy, ileostomy, ureterostomy, or other ostomy of the intestinal and/or urinary tract (excludes tracheotomy). "Radiation Therapy" includes any treatment plan involving radiation therapy, and "Hospice Benefit" counts residents who have elected to receive or are receiving the hospice benefit. "Dialysis" represents residents receiving hemodialysis or peritoneal dialysis within either the facility or offsite. "Tube Feeding" is defined as those receiving all or most of their nutritional requirements via a feeding tube that delivers food/nutritional substances directly into the GI system. "Eating Assistive Devices" are the percent of residents who use devices to maintain independence and to provide comfort when eating and include such things as plates with guards, large-handled flatware, large-handled mugs, extended-hand flatware, etc. "Mechanically Altered Diets" include pureed and/or chopped foods, not only meat. "Unplanned Weight Loss/Gain" is the percent of residents who have experienced gain or loss of five percent in one month or ten percent over six months. All averages are weighted.

Table III-5

Table III-5 reports the percent of residents who do not communicate in the dominant language at the facility, the percent who use non-oral communication devices (e.g., picture boards, computers, sign-language), and the percent of residents who have advanced directives, such as a living will or durable power of attorney for health care, recognized under state law and relating to the pro-visions of care when the individual is incapacitated. All averages are weighted.

Table III-6

The first column of Table III-6 represents the percent of residents in any category of developmental disability regardless of severity, as determined by the State Mental Health or State Mental Retardation authorities. The next column is the percent of residents with documented signs and symptoms of depression as defined by Mood and Behavior Section of the Minimum Data Set. "With Psychiatric Diagnosis" are the percent with primary or secondary psychiatric diagnosis, including but not limited to, schizophrenia, schizo-affective disorder, schizophreniform disorder, delusional disorder, and psychotic mood disorder. "Dementia" refer to residents with a primary or secondary diagnosis of dementia or organic mental syndrome including multi-infarct, senile type, Alzheimer's type, or other than Alzheimer's type. "Behavior Symptoms" refer to residents with one or more of the following symptoms: wandering, verbally abusive, physically abusive, socially inappropriate/disruptive, and resistive to care as defined in the Mood and Behavioral Patterns section of the Minimum Data Set. The next column reports the percentage of residents with behavior symptoms who are receiving an individualized care plan/program designed to address those symptoms. The last column in Table III-6 reports the percent of residents for whom the facility is providing health rehabilitative services for MI/MR as defined at 42CFR 483.45 (a) Specialized Rehabilitative Services. All averages are weighted.

Table III-7

Table III-7 reports the total number of nursing home residents by state (total census) and breaks the number out by payor mix. "Medicare" is defined as residents for whom the primary payor is Medicare and "Medicaid" is defined as residents for whom the primary payor is Medicaid. The residual category "Other" represents residents whose primary payor is neither Medicare nor Medicaid, typically private pays. All averages are weighted.

SECTION IV: SURVEY DEFICIENCIES

Table IV-1

Table IV-1 reports the unweighted average number of health deficiencies cited nationally and by state. The averages reported are the average total number of deficiencies, and the average number of "nursing" deficiencies. The creation of a nursing deficiencies category is an attempt to define a set of deficiency tag numbers that are related to quality of care, modeled after Jean Johnson-Pawlson's doctoral dissertation[5]. Nursing deficiencies are defined as any of the 48 tag numbers listed below.

"NURSING" DEFICIENCIES

TAG	Requirement
F154	Right to be fully informed in advance about care and treatment
F164	Right to privacy and confidentiality
F176	Self-administration of drugs
F221	Physical restraints

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[5] Johnson-Pawlson, Jean. "The Relationship between Nursing Staff and Quality of Care in Nursing Facilities." Diss. The George Washington University. 1993.

F222	Chemical restraints
F223	Right to be free from abuse
F224	Staff treatment of residents
F240	Quality of life
F241	Dignity
F242	Right to make choices about life in the facility
F246	Right to accommodations of individual needs and preferences
F252	Safe, clean, comfortable and homelike environment
F272	Comprehensive assessment
F273	Assessment within 14 days
F274	Assessment after significant change
F275	Assessment every 12 months
F276	Assessment review
F279	Develop comprehensive care plan
F280	Care plan developed by interdisciplinary team
F283	Discharge summary
F284	Post-discharge plan of care
F309	Highest practicable care
F310	ADLs do not diminish unless circumstances of the individual's clinical
F311	Treatments maintain or improve abilities
F312	ADL dependent residents receive necessary services
F313	Vision and hearing
F314	Pressure sores
F315	Resident's clinical condition demonstrates catheterization necessary
F316	Urinary incontinence
F317	No reduction in range of motion
F318	Range of motion treatment
F319	Mental treatment
F320	No development of mental problems
F321	Naso-gastric tubes
F322	Naso-gastric treatment
F323	Environment is free of hazards
F324	Prevent accidents
F325	Maintain nutrition
F326	Therapeutic diet
F327	Hydration
F328	Special treatments
F329	Pharmacy
F330	Not use antipsychotics
F331	Antipsychotic dose reductions
F332	5% medication error
F333	Residents free of significant medication errors
F369	Assistive devices while eating
F444	Hand washing / infection control

Table IV-2

Table IV-2 breaks out the total number of health deficiencies reported in Table IV-1 by class of ownership and state. Averages are unweighted.

Table IV-3

Table IV-3 categorizes standard annual survey results both nationally and by state. The first column reports the percentage of nursing homes that were deficiency-free. The next two columns report the percentage of nursing homes that were in substantial compliance. The first is the percent in substantial compliance on the date that the CASPER data tape was created (December 9, 2015). These numbers approximate the percent of facilities in substantial compliance at any given time during the year. The next column is the percentage of facilities that were in substantial compliance at the conclusion of their standard annual survey. These numbers are much lower than the prior column because they are before the facility has had an opportunity to correct the deficiencies. Any citation at a D level or higher puts them out of compliance for the purposes of this definition. The last column reports the percentage of facilities categorized as providing "substandard quality of care" (SQC). SQC is defined as receiving any deficiency in 42 CFR 483.13, Resident Behavior and Facility Practices, 42 CFR 483.15 Quality of Life, or 42 CFR 483.25 Quality of Care, that constitutes immediate jeopardy to resident health or safety;, or, a pattern of or widespread actual harm that is not immediate jeopardy; or, a widespread potential for more than minimal harm that is not immediate jeopardy; or, a widespread potential for more than minimal harm that is not immediate jeopardy, with no actual harm. Thus, facilities are coded to be SQC if they are cited at a scope and severity level of F, H, J, K, L, or I for any deficiency in the sequence F221-F225, F240-F258, or F309-F333. The last column reports the percentage of facilities cited for at least one deficiency at the level of J, K, or L. For a description of the scope and severity codes see "Figure IV-B: Scope and Severity Code Utilization, United States, 2015".

Table IV-4

Table IV-4 reports the forty most frequently cited deficiencies in the United States by tag number in decreasing frequency.

Table IV-5 Table

IV-5 reports the top deficiencies by decreasing frequency for each state and the District of Columbia.

Table IV-6

This table shows the frequency distribution of the scope and severity codes. The rows sum to 100 percent.

SECTION V: FACILITY CHARACTERISTICS

Table V-1

Table V-1 shows the number of certified nursing facilities in the United States broken out by state and type of certification.

Table V-2

Table V-2 reports the total number of certified nursing facilities in the United States broken out by state and class of ownership.

Table V-3

Table V-3 reports the total number of certified nursing facilities in the United States broken out by state and facility size category.

Table V-4

Table V-4 reports the total number of beds in certified facilities by state and breaks out the total by type of certification, including uncertified beds in certified facilities.

Table V-5

Table V-5 reports dedicated special care units and beds by special care category and state. These are units with a specific number of beds, identified and dedicated by the facility for residents with specific needs/diagnoses. They need not be certified or recognized by regulatory authorities. For example, a SNF admits a large number of residents with head injuries. They have set aside eight beds, staffed with specially trained personnel. The facility would contribute eight to the total shown in the column "Head Trauma Beds" and one to the column "Head Trauma Units".

Table V-6

Table V-6 reports occupancy rates, which are computed by dividing the total number of nursing home residents (total census as reported on Table III-7) by the total number of beds (as reported on Table V-4).

SECTION VI: STAFFING INFORMATION

Tables VI-1 to VI-3

These tables contain information about staffing patterns for physical therapists, occupational therapists, and speech pathologists respectively. The first column reports the percentage of facilities that report zero staff hours in the referenced labor category. The next column, "On Staff Only" is the percentage of facilities that report all hours as staff hours. The next column reports the percentage of facilities that report all hours as contract hours. The last column is the percentage of facilities that report both staff and contract hours in the referenced labor category.

Table VI-4

This table reports the percentage of facilities that use contract nurses and nurse aides. Facilities that report contract hours as a positive number are counted as using contract labor in the referenced labor category, otherwise not.

Tables VI-5 to VI-8

Tables VI-5 through VI-8 report staffing hours per patient day in fourteen specific staffing categories. The data are compiled from staffing hours reported on page 2 of CMS Form 671. We used univariate analyses and professional judgment to eliminate unlikely values prior to computing

the reported averages. The reported averages are unweighted. Mutually exclusive staffing categories are defined as follows:

- **RN Director of Nursing.** Professional registered nurse(s) administratively responsible for managing and supervising nursing services within the facility.

- **Nurses with Administrative Duties.** Nurses (RN, LPN, LVN) who, as either a facility employee or contractor, perform the Resident Assessment Instrument function in the facility and do not provide direct patient care.

- **Other Registered Nurses.** Licensed in the state of operation to practice as registered nurses, including geriatric nurse practitioners and clinical nurse specialists who primarily perform nursing, not physician-delegated tasks.

- **Licensed Practical Nurses.** Licensed in the state of operation to practice as licensed practical/vocational nurses.

- **Certified Nurse Aides.** Have completed a state approved training and competency evaluation program, or competency evaluation program approved by the State. Does not include volunteers.

- **Nurse Aides in Training.** In the first four months of employment and who are receiving training in a state approved nurse aide training and competency evaluation program and are providing nursing or nursing-related services for which they have been trained or are under the supervision of a licensed or registered nurse. Excludes volunteers.

- **Medication Aides/Technicians.** Individuals, other than a licensed professional, who fulfill the state requirement for approval to administer medications to residents.

- **Occupational Therapists.** Persons licensed/registered as occupational therapists (OTs) according to state law. Includes OTs who spend less than 50% of their time as activities therapists.

- **Occupational Therapy Assistants.** Have licenses/certification and specialized training to assist a licensed/certified/registered OT to carry out the OT's comprehensive plan of care, without the direct supervision of the therapist. Includes OT Assistants who spend less than 50% of their time as activities therapists.

- **Occupational Therapy Aides.** Have specialized training to assist an OT in carrying out the OT's comprehensive plan of care under the direct supervision of the therapist.

- **Physical Therapists**. Licensed/registered as physical therapists (PTs).

- **Physical Therapy Assistants.** Have licenses/certification and specialized training to assist a licensed/certified/registered PT in carrying out the PT's comprehensive plan of care, without the direct supervision of a PT.

- **Physical Therapy Aides**. Have specialized training to assist a PT in carrying out the PT's comprehensive plan of care under the direct supervision of the therapist.

- **Speech Language Pathologists.** Licensed/registered to provide speech therapy and related services (e.g., teaching a resident to swallow).

Table VI-9

Table VI-9 breaks out the national staffing numbers reported on line 1 of Tables VI-5 through VI-8 by class of ownership.

ABOUT THE AUTHOR

C. McKeen (Mick) Cowles, President and Owner of Cowles Research Group (CRG), is a nationally recognized authority on large government databases. Mick worked for the federal government for twelve years, the last four for the Health Care Financing Administration's Office of Research. He was the director of health data systems at Muse and Associates in Washington, D. C. and prior to that was the manager for research and data programs at the American Health Care Association. Mick founded CRG in 1994 to provide clients with critical information extracted from government health databases. Law firms, academic researchers, associations, corporations, consultants, and the federal government retain CRG. Since 1995, Mick has produced the *Nursing Home Statistical Yearbook* on an annual basis.

SECTION I

RESIDENT ACUITY