



# Understaffing in Long-Term Care Facilities

Part 1

Nicole Snapp-Holloway



# Overview:

- What is understaffing?
- Where do you get staffing information?
- What do you compare the staffing information to?
- How do you do those calculations?

# Why bother with details of understaffing:

- ▶ When we find out what staffing levels they reported to CMS, etc.
  - ▶ *(Reported Staffing)*
- ▶ And then find out what they spent on their reported staffing
  - ▶ *(Staffing Costs)*
- ▶ We can figure out how much staff they *should* have had
  - ▶ *(Expected Staffing)*
- ▶ Now we can calculate what they saved (stole) by intentionally understaffing:
  - ▶ **(Expected – Reported) \* Staffing Cost = \$Profit to Defs\$**



# WHAT IS UNDERSTAFFING?

It's more than just "warm bodies"



# Understaffing is the *failure* to maintain:


- ▶ Sufficient nursing staff
- ▶ With the appropriate competencies and skill sets
- ▶ To provide nursing and related services *to assure resident safety*
- ▶ And the highest practicable physical, mental, and psychosocial well-being of each resident
- ▶ A registered nurse at least 8 consecutive hours, 7 days a week § 483.35(b)(1).



# Understaffing is the *failure* to staff according to:

- ▶ Resident assessments and individual plans of care
- ▶ The number, acuity and diagnoses of the facility's resident population
- ▶ In accordance with the facility assessment required at § 473.70(e)

42 CFR § 483.35 (Nursing Services)



# Understaffing is the *failure* to ensure staff is competent:

- ▶ Licensed nurses must have the specific competencies and skills sets . . .to care for residents' needs. § 483.35(a)(3)
- ▶ Nurse Aides must demonstrate competency in skills and techniques necessary to care for residents' needs. § 483.35(d)

42 CFR § 483.35 (Nursing Services)



# Understaffing is the *failure* to assess facility:

- ▶ § 483.70 Administration

- ▶ (e) Facility Assessment

- ▶ The facility must conduct and document a facility-wide assessment to *determine what resources are necessary to care for its residents* competently during both day-to-day operations and emergencies. The facility must review and update that assessment, as necessary, and at least annually.





# What does understaffing do?

- ▶ It puts the residents in danger.
  - ▶ It makes the facility a lot of money.
- 

- 
- 
- Pressure sores
    - Falls
  - Infections that progress to sepsis
  - Malnutrition/
  - Dehydration

Understaffing  
Puts the  
Residents in  
Danger


Understaffing is the cause  
of (almost) every injury in a  
long-term care facility.

Don't Let Defendants Distract You.

# CMS Admits Staffing Affects Outcomes:

## **Staffing Domain**

There is considerable evidence of a relationship between nursing home staffing levels and resident outcomes. The CMS Staffing Study<sup>2</sup>, among other research, found a clear association between nurse staffing ratios and nursing home quality of care.



➔ Staffing is the *largest expense* in a long-term care facility.

➔ Staffing is the most significant variable expense *the facility can control.*

➔ Less Staff = More Money

Understaffing  
Makes the  
Facility  
Money \$\$\$\$

Understaffing is the cause of (almost) every injury in a long-term care facility.

Don't Let Defendants Distract You.



# WHERE DO YOU GET STAFFING INFORMATION?

Where are the bodies buried?

# Sources of Staffing Data:

## ▶ CMS 2540

- ▶ Annual Federal Cost Report
- ▶ Includes paid hours per type and avg hourly wage

## ▶ CMS 671

- ▶ Collected at the time of the Survey
- ▶ Covers the 2 weeks immediately prior to the survey

## ▶ PBJ Data (2017 – Present)

- ▶ Submitted to CMS every 90 days
- ▶ Provides *daily* staffing hours for each type (RN/LVN/Aide)

## ▶ Medicaid Cost Reports

- ▶ Not collected by every state (known are: AZ, CA, FL, OK & PA)
- ▶ Often contains “worked” time

## ▶ Staffing Assignment Sheets

- ▶ This is what they intended to have
- ▶ Almost never matches punch detail
- ▶ Difficult to use for calculations

## ▶ Punch Detail

- ▶ Most accurate data source
- ▶ Gold standard for staffing data
- ▶ Easy to transfer to spreadsheets for calculations

# CMS 671

- Handwritten
- Rarely accurate
- Telling the surveyors what they want to hear
- Becomes "stale" due to the length of time between surveys

COPY

		FACILITY STAFFING															
	Tag Number	A Services Provided			B Full-Time Staff (hours)			C Part-Time Staff (hours)			D Contract (hours)						
		1	2	3	1	2	3	1	2	3	1	2					
Administration	F33							6	3	2							
Physician Services	F34	Y	N	Y													
Medical Director	F35																
Other Physician	F36																16
Physician Extender	F37	Y	N	N													16
Nursing Services	F38	Y	N	N													48
RN Director of Nurses	F39									8	0						
Nurses with Admin. Duties	F40							7	0	0							
Registered Nurses	F41									8	1						
Licensed Practical/ Licensed Vocational Nurses	F42																
Certified Nurse Aides	F43							1	1	6	5						
Nurse Aides in Training	F44							2	9	1	0						
Medication Aides/Technicians	F45										0						
Pharmacists	F46	Y	N	N													
Dietary Services	F47	Y	N	N													
Dietitian	F48																
Food Service Workers	F49																20
Therapeutic Services	F50																783
Occupational Therapists	F51	Y	N	N													135
Occupational Therapy Assistants	F52																101
Occupational Therapy Aides	F53																0
Physical Therapists	F54	Y	N	N													146
Physical Therapists Assistants	F55																148
Physical Therapy Aides	F56																0
Speech/Language Pathologist	F57	Y	N	N													86
Therapeutic Recreation Specialist	F58	N	N	N													
Qualified Activities Professional	F59	Y	N	N						8	0						
Other Activities Staff	F60	Y	N	N						1	6	0					
Qualified Social Workers	F61	Y	N	N						1	6	0					
Other Social Services	F62	Y	N	N							0						
Dentists	F63	Y	N	N													0
Podiatrists	F64	Y	N	N													0
Mental Health Services	F65	Y	N	N													8
Vocational Services	F66	Y	N	N													
Clinical Laboratory Services	F67	Y	N	N													
Diagnostic X-ray Services	F68	Y	N	N													
Administration & Storage of Blood	F69	Y	N	N													
Housekeeping Services	F70	Y	N	N													740
Other	F71										8	0					

Name of Person Completing Form Lydia R. Alexander  
 Signature *Lydia R. Alexander*  
 Time 12:06 PM  
 Date 3/2/16  
 Form CMS 671 (12/02)

# Payroll Based Journal (PBJ)

- Mandatory from 2017 to present
- Very Detailed
- Shows daily hours for each type of care giver

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	PROVNUM	PROVNAME	STATE	CY_Qtr	WorkDate	hrs_RN_DONadmin	hrs_RN	hrs_LPN_admin	hrs_LPN	hrs_CNA	hrs_NA_trn	hrs_MedAide	MDSscensus
2	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170101	0	9.27	0	45.77	121	0	0	55
3	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170102	22.75	32.38	0	40	166.05	0	0	54
4	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170103	30.25	26.33	9	46.48	174.9	0	0	55
5	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170104	29.75	15.83	8.5	47.03	175.69	0	0	55
6	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170105	24	25.53	12.5	47.45	174	0	0	56
7	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170106	22.25	28.68	10.25	49.53	167.35	0	0	57
8	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170107	0	9.63	0	48	164.58	0	0	57
9	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170108	0	10	0	48	125.74	0	0	57
10	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170109	31	25.97	10	40.25	165.83	0	0	56
11	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170110	30.5	26.52	9.5	39.75	171.4	0	0	55
12	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170111	31	23	7.5	48.25	167.74	0	0	54
13	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170112	30.75	17.18	7	61.25	165.72	0	0	54
14	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170113	31	17.48	6.75	54.75	162.95	0	0	54
15	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170114	0	18.25	0	39.5	133.65	0	0	52
16	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170115	0	10	0	47.3	113.75	0	0	52
17	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170116	31.75	24	8	55.44	156.62	0	0	53
18	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170117	32	19.62	9	53.75	166.05	0	0	50
19	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170118	30.75	25.72	7.5	48.3	150.64	0	0	49
20	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170119	31	24.58	8.25	46	128.85	0	0	52
21	15009	BURNS NURSING HOME, INC.	AL	2017Q1	20170120	32.75	28.08	9.25	55.64	160	0	0	52



# Staff Assignment Sheets (or Schedule)

## Licensed Nurses, RT:

Assignment	Name, Title	Signature	Hours	Assignment	Name, Title	Signature	Hours
Nursing supervisor:	Vannsotheary Doung, RM			Charge Nurse Cart 1:	Llukan Gjika, LVN		
Nursing supervisor:	Sandiya Reddy, LVN			Charge Nurse Cart 2:	Melanie Tracy, RN		
RT (12hr shift):	David Khlok			Charge Nurse Cart 3:	Luis Tapia, LVN		
RT (12hr shift):	Princhas Toderean MICHAEL PURTCHAMPONE			Charge Nurse Cart 4:	Suzan Denney, LVN		
				Charge Nurse Cart 5:	Tatyana Lobodo, RN		

## CNA:

Group #	Name	Signature	Assignments	Showers	Additional Assignments	Hours
1 Breaks: 16:15, 21:00 Lunch: 19:00	Roshila Sharma		16A - 18D + 21A		Clear Hallways FEED/ASSIST	
2 Breaks: 16:30, 21:15 Lunch: 19:30	Saidu Komeh		19A - 21D NO 21A		Clean Nurses Station FEED/ASSIST	
3 Breaks: 16:15, 21:00 Lunch: 19:00	Bernard Escasinas Shekira Thompson		24A - 26B		Clean Shower Room FEED/ASSIST	
4 Breaks: 16:30, 21:15 Lunch: 19:30	Vanessa Hill Kendra Ward		27A - 28D		Clean Utility Room FEED/ASSIST	
5 Breaks: 16:15, 21:00 Lunch: 19:00	Svetlana Zamanov Nisa Turner		29A - 30D			
6 Breaks: 16:30, 21:15 Lunch: 19:30	Orientee Shekira Thompson With Bernard					

Please Replace all Call Off's

Employee: Lavrenko, Tatyana		ID: 1171018304	Time Zone: Pacific								
Status: Active		Status Date: 7/1/2013	Pay Rule: P18 RN								
Primary Account		Start	End								
117/OLE615/004F/OC/I-I-		7/1/2013	7/1/2014								
117/OLE515/004F/OC/I-I-		7/1/2014	5/1/2016								
Date/Time	Apply To	In Punch	In Exc	Out Punch	Out Exc	Override Amount	Adj/Ent Amount	Money Amount	Day Amount	Totaled Amount	Cum. Tot. Amount
<i>Xfr/Move: Account</i>		<i>Comment</i>			<i>Xfr: Work Rule</i>						
1/2/2014	12:00 AM	This Day Approved					1.00				
1/6/2014		10:22:00 PM		3:34:00 AM						5.25	5.25
					LE						
1/6/2014	12:00 AM	This Day Approved					1.00				
1/7/2014	-	4:04:00 AM		7:23:00 AM						3.50	8.75
		<i>O: Meal Taken</i>									
1/7/2014	12:00 AM	This Day Approved					1.00				
1/14/2014		10:23:00 PM		3:46:00 AM						5.25	14.00
					LE						
1/14/2014	12:00 AM	This Day Approved					1.00				
1/15/2014	-	4:20:00 AM		7:04:00 AM						2.68	16.68
		<i>O: Meal Taken</i>									
1/15/2014		10:19:00 PM		4:06:00 AM						5.75	22.43
					LE						



# Punch Detail

	A	B	C	D	E
1	Line No.	Salaries and Wages Nursing Services (Exclude Sub-Acute Care, Sub-Acute Care - Pediatric, and Transitional Inpatient Care)	(1) Productive Hours *	(2) Productive Salaries and Wages **	(3) Hourly Average (Col 2 / Col 1)
2					
3	5	Supervisors and Management	1904	142523	74.85
4	10	Geriatric Nurse Practitioners			
5	25	Registered Nurses	8537	351999	41.23
6	30	Licensed Vocational Nurses	29857	840545	28.15
7	35	Nurse Assistants (Aides and Orderlies)	79012	1060316	13.42
8	40	Technicians and Specialists			
9	45	Psychiatric Technicians			
10	60	Other Salaries and Wages			
11	65	SUBTOTAL (Sum of Lns 5 thru 60)	119310	2395383	20.08



# California Medicaid Cost Report

Nursing Home Facility Audit Summary => Salary and Wages				
<b>Nursing Home ID</b>	538	<b>Summary for Year Ending</b>	06/30/2015	
<b>Facility Name</b>	THE HIGHLANDS AT OWASSO	<b>Actual Patient Days</b>	28,631	<b>Provider Number</b> [REDACTED]
<b>Available Bed Days</b>	38,325	<b>Medicaid Days</b>	17,650	<b>% Occupancy</b> 74.71
<b>Organization Type</b>	Corporat on	<b>Medicare Days</b>	5,472	<b>County</b> Tulsa
<b>Facility Type</b>	Adult NF	<b>Other Days</b>	5,509	<b>Area</b> Urban
<b>Direct Care</b> <span style="float: right;">[-]</span>				
	<u>Cost per Day</u>	<u>Cost per Hour</u>	<u>Total Cost</u>	<u>Total Hours</u>
<b>Registered Nurses</b>	\$7.08	\$27.58	\$202,816.00	7,353
<b>Licensed Practical Nurses</b>	\$20.82	\$21.24	\$596,044.00	28,063
<b>Director of Nursing</b>	\$4.52	\$90.66	\$129,365.00	1,427
<b>Nurse Aides</b>	\$23.96	\$12.56	\$685,857.00	54,627
<b>CMA Aides</b>	\$5.41	\$9.40	\$155,019.00	16,494
<b>QMRP's (ICF/MR Only)</b>				
<b>Medical Director</b>				



# Oklahoma Medicaid Cost Report

A		B	C	D	E	F	G	H	I
1	11-12								FORM CMS-2540-10
2	SKILLED NURSING FACILITY AND								PROVIDER C
3	SKILLED NURSING FACILITY HEALTH CARE COMPLEX								
4	STATISTICAL DATA								
5									
6									
7	<i>PART I - STATISTICAL DATA</i>								
8	Component	Number of Beds	Bed Days Available	Inpatient Days / Visits					
9				Title V	Title XVIII	Title XIX	Other	Total	
10		1	2	3	4	5	6	7	
11									
12	1	Skilled Nursing Facility	99.	36,135.	5,065.	23,119.	5,138.	33,322.	
13	2	Nursing Facility							
14	3	ICF-Mentally Retarded							
15	4	Home Health Agency							
16	5	Other Long Term Care							
17	6	SNF-Based CMHC							
18	7	Hospice							
19	8	Total (sum of lines 1-7)	99.	36,135.	5,065.	23,119.	5,138.	33,322.	



# CMS 2540 Worksheet S-3

PART III - OVERHEAD COST - DIRECT SALARIES							
		Amount Reported	Reclass. of Salaries from Wkst. A-6	Adjusted Salaries ( col. 1 ± col. 2 )	Paid Hours Related to Salary in col. 3	Average Hourly Wage ( col. 3 ÷ col. 4 )	
		1	2	3	4	5	
46	1	Employee Benefits					1
47	2	Administrative & General	370,346.	370,346.	12,754.	29.04	2
48	3	Plant Operation, Maintenance & Repairs	55,777.	55,777.	3,155.	17.68	3
49	4	Laundry & Linen Service					4
50	5	Housekeeping	3,035.	3,035.	233.	13.03	5
51	6	Dietary	289,536.	289,536.	21,504.	13.46	6
52	7	Nursing Administration	9,406.	9,406.	287.	32.77	7
53	8	Central Services and Supply					8
54	9	Pharmacy					9
55	10	Medical Records & Medical Records Library	87,461.	87,461.	4,395.	19.9	10
56	11	Social Service	72,526.	72,526.	3,669.	19.77	11
57	12	Nursing and Allied Health Ed. Act.					12
58	13	Other General Service (specify _____ )	70,986.	70,986.	5,184.	13.69	13
59	14	Total (sum lines 1 through 13)	959,073.	959,073.	51,181.	18.74	14

CMS 2540 Worksheet S-3-II

# CMS 2540 Worksheet S-3-V

	A	B	C	D	E	F	G	H
1	4190 (Cont.)		FORM CMS-2540-10					11-12
2	SNF REPORTING OF		PROVIDER CCN:		PERIOD:		WORKSHEET S-3	
3	DIRECT CARE EXPENDITURES				FROM _____		PART V	
4					TO _____			
5								
6								
7								
8								
9								
10								
11	OCCUPATIONAL CATEGORY		Amount Reported	Fringe Benefits	Adjusted Salaries ( col. 1 + col. 2 )	Paid Hours Related to Salary in col. 3	Average Hourly Wage ( col. 3 ÷ col. 4 )	
12	Direct Salaries		1	2	3	4	5	
13	Nursing Occupations							
14	1	Registered Nurses (RNs)	314,352.		314,352.	8,321.	37.78	1
15	2	Licensed Practical Nurses (LPNs)	1,212,797.		1,212,797.	43,299.	28.01	2
16	3	Certified Nursing Assistants/Nursing Assistants/Aides	1,017,662.		1,017,662.	82,835.	12.29	3
17	4	Total Nursing (sum of lines 1 through 3)	2,544,811.		2,544,811.	134,455.	18.93	4
18	5	Physical Therapists	10,305.		10,305.	199.	51.78	5
19	6	Physical Therapy Assistants	3,854.		3,854.	92.	41.89	6
20	7	Physical Therapy Aides						7
21	8	Occupational Therapists	16,581.		16,581.	311.	53.32	8
22	9	Occupational Therapy Assistants	8,687.		8,687.	211.	41.17	9
23	10	Occupational Therapy Aides						10
24	11	Speech Therapists	5,816.		5,816.	106.	54.87	11
25	12	Respiratory Therapists						12
26	13	Other Medical Staff						13
27	Contract Labor							
28	Nursing Occupations							
29	14	Registered Nurses (RNs)	11,950.		11,950.	159.	75.16	14
30	15	Licensed Practical Nurses (LPNs)						15
31	16	Certified Nursing Assistants/Nursing Assistants/Aides						16
32	17	Total Nursing (sum of lines 14 through 16)	11,950.		11,950.	159.	75.16	17
33	18	Physical Therapists	364,910.		364,910.	5,308.	68.75	18
34	19	Physical Therapy Assistants						19
35	20	Physical Therapy Aides						20
36	21	Occupational Therapists	315,243.		315,243.	4,670.	67.5	21
37	22	Occupational Therapy Assistants						22
38	23	Occupational Therapy Aides						23
39	24	Speech Therapists	40,573.		40,573.	601.	67.51	24
40	25	Respiratory Therapists						25
41	26	Other Medical Staff						26
42								
43								

WHAT DO YOU  
COMPARE THE  
STAFFING TO?

To show that the facility was understaffed. . .





# Expected Staffing Values – What are they?

- ▶ CMS (used to) calculate and publish “Expected Staffing” as the amount of staff a facility *SHOULD* have for a given reporting period
- ▶ These were in contrast to the “Reported” Staffing numbers the facility gives CMS (671/PBJ/Medicaid Cost Reports/Punch Detail)




## Acronyms to Know when Talking about Staffing

MDS – Minimum Data Set

RAI – Resident Assessment Instrument

RUG – Resource Utilization Group

PPS – Prospective Payment System



# Acronyms to Know when Talking about Staffing

- ▶ RAI – Resident Assessment Instrument
  - ▶ General name for the process CMS uses to gather and reports information about a resident;
  - ▶ Involves a clearly defined and detailed process;
  - ▶ The RAI Manual CMS provides facilities has detailed instructions on *how* and *when* to complete the MDS for each resident




# Acronyms to Know when Talking about Staffing

- ▶ MDS – Minimum Data Set
  - ▶ The “form” that is completed/created by the facility which contains information about the resident and their condition/status




# Acronyms to Know when Talking about Staffing

- ▶ RUG – Resource Utilization Group (aka RUG score)
  - ▶ This is the “Score” that is derived by CMS from the MDS information (in the RAI process) that categorizes each resident by condition/acuity



# Acronyms to Know when Talking about Staffing

- ▶ PPS – Prospective Payment System
  - ▶ The system used by CMS to correlate MDS information to RUG scores and calculate a reimbursement rate
  - ▶ RUG = \$\$
- ▶ As of October 2019 – PDPM is the new acronym – Patient Driven Payment Model



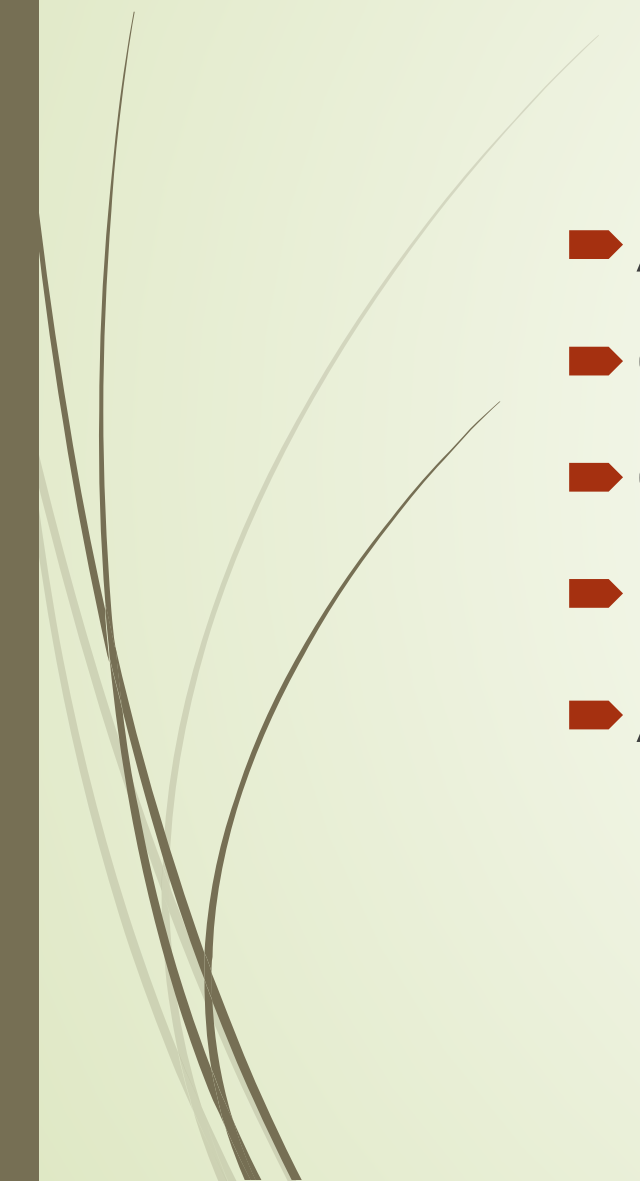
# What Happens When a Resident is Admitted to a CMS Certified Facility?

- The Facility Conducts a Comprehensive *MDS*\* Assessment and submits it to CMS;
- This is done for EVERY resident regardless of payor


\*using the strict procedures outlined in the RAI Manual



# When is an MDS Completed?

- An MDS is required on Admission, and
  - On Change of Condition; and
  - On discharge; and
  - For Medicare patients, at 30/60/90 days; and
  - At least Quarterly for every resident.
- 





# The MDS is the Bridge to Expected Staffing.

## Why?

## RUGs

- ▶ Nursing Facilities will admit the importance of the MDS process because this is HOW THEY GET PAID
  - ▶ They do not question the process of transforming the MDS data into a RUG score
  - ▶ They do not question the reimbursement rates (even if they don't like them)
  - ▶ They do not question the process by which the reimbursement rates are calculated
    - ▶ This process is similar to the method used to calculate expected staffing

# The Relationship between the Tools in the Prospective Payment System:

The RAI Manual Describes the purpose and process, and instructs on how to complete the MDS

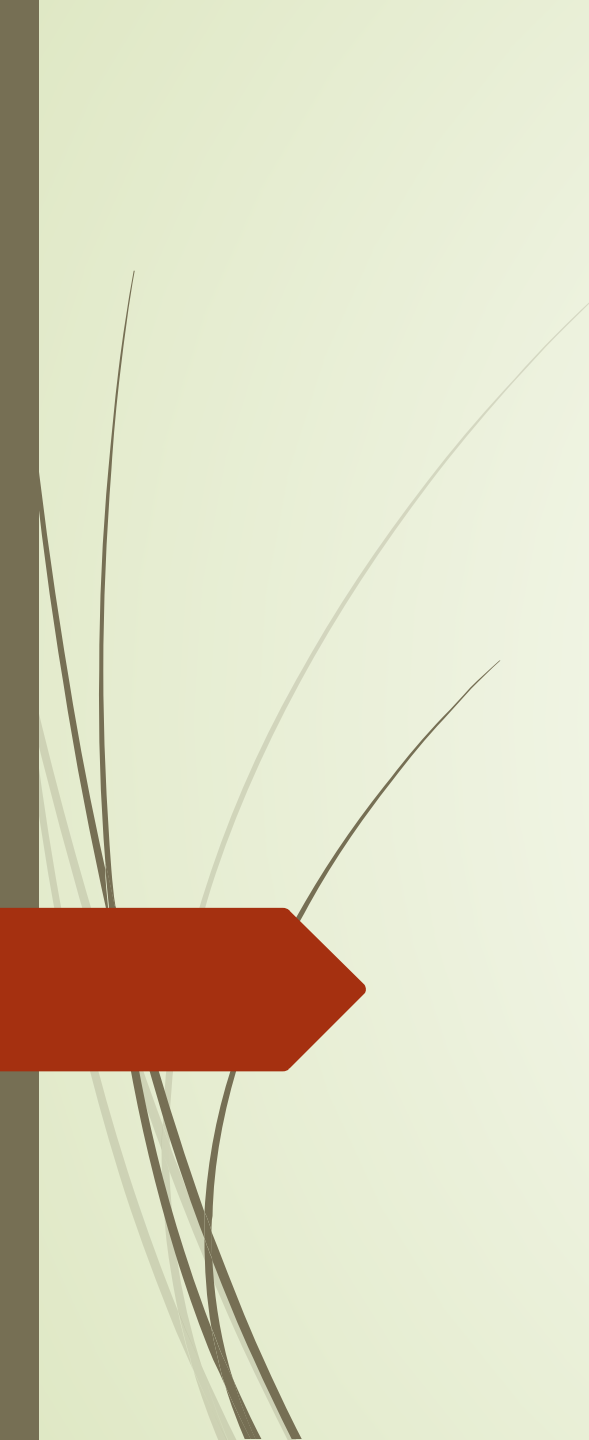
The MDS is what is transmitted to CMS and is used to determine the RUG score

The RUG scores is what determines the reimbursement rate – AND – is a factor in Expected Staffing



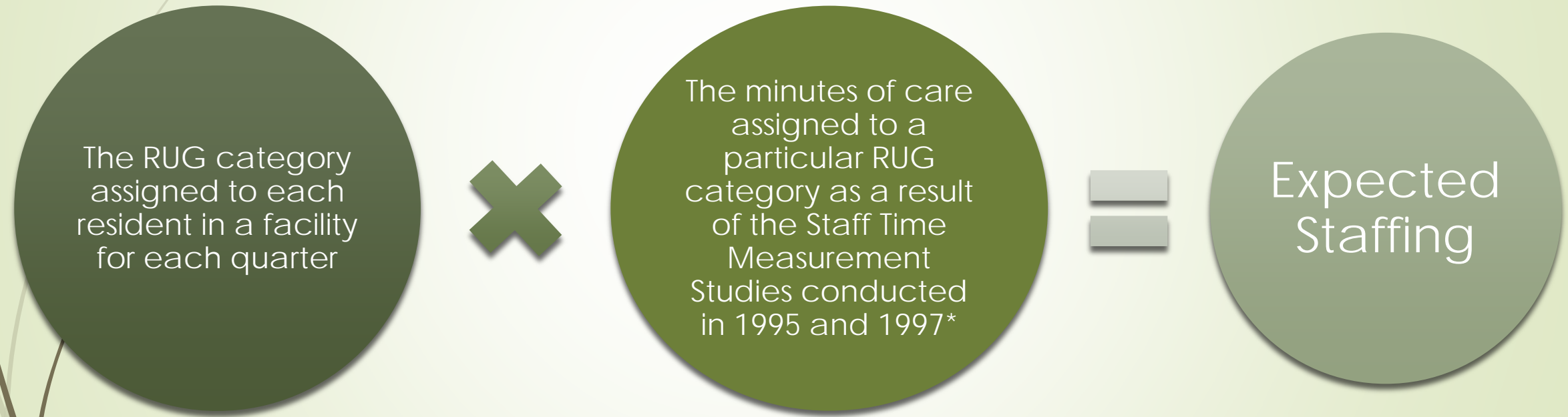
## Why are RUG Scores Important?

- RUG Scores determine expected staffing
- RUG Scores determine Reimbursement Rates
- RUG Scores = \$\$\$



I finally have some RUG  
Scores –  
how do I get to “expected”  
staffing?

# Expected Staffing Values are a function of:



(Technical Manual p. 7 and Appendix Table A1)

# RUG Category for Each Resident X Nursing Minutes from Time Study\*\*

= Total Expected Staffing Minutes

(Table A1 from Five Star-Rating Technical Users Guide)

1995-1997 Study (Used until April 2018)


STRIVE Study (1<sup>st</sup> Included in TUG April 2018)

## Appendix

**Table A1  
RUG Based Case-Mix Adjusted Nurse and Aide Staffing Minute Estimates**

1995-1997 Time Study Average Times (Minutes)					
RUG-53	Resident Specific Time + Non-Resident Specific Time Minutes				
Group	STAFF TYPE				Total Minutes
	RN	LPN	Nurse Total	AIDE	All Staff Types
<b>REHAB &amp; EXTENSIVE</b>					
RUX	160.67	84.89	245.56	200.67	446.22
RUL	127.90	59.19	187.10	134.57	321.67
RVX	137.28	58.33	195.61	167.54	363.15
RVL	128.93	47.75	176.67	124.30	300.97
RHX	130.42	48.69	179.12	155.39	334.50
RHL	117.25	69.00	186.25	127.00	313.25
RMX	163.88	91.36	255.24	195.76	450.99
RML	166.61	62.68	229.29	147.07	376.36
RLX	116.87	55.13	172.00	132.63	304.63

Major RUG Group	RUG-IV Code	STRIVE Study Average Times (Minutes) <sup>1</sup>				
		RN	LPN	Total Licensed	Nurse Aide	Total Nurse (RN+LPN+Aide)
Rehab Plus Extensive	RUX	68.37	111.44	179.81	131.11	310.92
	RUL	109.06	63.87	172.93	199.94	372.87
	RVX	29.24	95.88	125.12	145.94	271.06
	RVL	67.74	97.39	165.13	139.99	305.12
	RHX	128.79	51.92	180.71	155.24	335.95
	RHL	67.28	48.41	115.69	135.32	251.01
	RMX	97.54	74.61	172.15	148.44	320.59
	RML	133.82	84.01	217.83	153.24	371.07
	RLX	133.82	84.01	217.83	153.24	371.07
Rehab	RUC	27.80	66.41	94.21	148.95	243.16
	RUB	45.01	71.09	116.10	141.03	257.13
	RUA	35.18	54.55	89.73	101.01	190.74
	RVC	34.22	68.45	102.67	156.53	259.20
	RVB	28.86	56.56	85.42	119.90	205.32
	RVA	31.30	59.35	90.65	113.73	204.38
	RHC	36.62	54.88	91.50	156.14	247.64
	RHB	36.42	47.88	84.30	119.48	203.78



How did  
we get  
here?

- ▶ **2008** – CMS Adds “*Five Star Quality Rating System*” to CMS Nursing Home Compare
- ▶ **2012** – CMS Adds new public information for the 5 Star System.
- ▶ **2015** – Adds measures of antipsychotic use in calculations and adjusts QM and staffing methodology
- ▶ **2017** – New Inspection Process Implemented in November – CMS “Froze” Including Health Inspection Ratings in 5 Star Calculations
- ▶ **2018** – Calculations Now Based on Strive Study Minutes for RUG IV categories
- ▶ **2018** – Staffing Data from 671/672 is replaced with Payroll Based Journal (PBJP System Data)
- ▶ **2019 (April)** - “Expected Staffing” Language removed from Technical Users’ Guide - Changes to Methodology in Calculating Each Domain within the 5 Star System
- ▶ **2019 (Oct)** – PDPM (Patient Driven Payment Model) Implemented



Where do we go from here?



A dense forest of birch trees with white bark and vibrant yellow autumn foliage. The trees are tall and slender, with their white trunks standing out against the bright yellow leaves. The forest is thick, with many trees visible in the background, creating a sense of depth. The lighting is bright, suggesting a sunny day, and the overall atmosphere is peaceful and serene.

# Staffing – Part 2

Ernest C. Tosh

# Apologies

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- This is not my standard “how to do calculations” presentation.
- There is no math in this presentation.
- There are no formulas.
- Unfortunately doing staffing comparisons probably can't be done by hand anymore.

Most attorneys with math

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# How do we calculate expected staffing?

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- CMS was calculating and publishing expected staffing prior to April 1, 2018 based on each facilities submitted RUG scores.
- CMS no long calculates it.
- Must have all RUG scores from a facility
- PDPM (Oct. 1, 2019) uses a different acuity system (no long based on RUGs)

# Schnelle CNA Model

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## Dr. John (Jack) Schnelle, Ph.D.

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- Professor of Medicine, Division of Geriatric Medicine, Vanderbilt University.
- Has published more than 200 articles.
- Principle investigator on 9 NIH clinical trial intervention grants.
- CMS expert advisory panel for the Five Star Rating System.

# 2001

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CMS used a simulator to study staffing in nursing homes.

- US Centers for Medicare and Medicaid Services, Prepared by Abt Associates Inc. **Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes.** Report to Congress: Phase II Final. Volumes I-III. Baltimore, MD: CMS; 2001.

# JAMDA

JAMDA 17 (2016) 970–977



JAMDA

journal homepage: [www.jamda.com](http://www.jamda.com)



Special Article

## Determining Nurse Aide Staffing Requirements to Provide Care Based on Resident Workload: A Discrete Event Simulation Model



John F. Schnelle PhD<sup>a,b,\*</sup>, L. Dale Schroyer MMS<sup>c</sup>, Avantika A. Saraf MPH<sup>a,d</sup>,  
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<sup>c</sup>ProModel Corporation, Life Sciences Vertical, Allentown, PA

<sup>d</sup>Vanderbilt University Medical Center, Division of Cardiovascular Medicine, Nashville, TN



# Simulator is accurate but difficult

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- Costs several million dollars to build the simulator
- Has to be programmed for each individual facility (including the floorplan)
- Have to run several thousand simulations per scenario
- Costs roughly \$30,000 in computation time each time it is run

# Study found ADLs are Underserviced

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- ADL loads for nursing homes with lower acuity populations need at least 2.8 hours of CNA per patient per day to keep care omissions below 10%.
- Highest acuity facilities need up to 3.6 hours of CNAs per patient per day to keep care omissions below 10%.

# Two Studies

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- 1995-1997 (STM)
- Conducted by CMS
- Used by CMS to calculate expected staffing for years.
- Schnelle – CNA Simulation
- Used CMS' simulator
- Used in state level consumer fraud actions and class action litigation against nursing homes.

# STRIVE is Dead

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- Lt. Col. David M. Oatway (ret.) – in response to a class certification in CA. filed an affidavit and gave a supporting deposition stating the STRIVE time study was not designed for “expected staffing” calculations and **CAN NOT** be used for “expected staffing” calculations.
- Once CMS switched to the STRIVE for the Five Star Rating System the CMS Technical User’s Guide no longer used the term “expected staffing”.
- New terminology is “case-mix adjusted”; it is **NOT** the same as expected staffing.

# New Model for Expected Staffing

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## Dr. Charlene Harrington, PhD, RN, FAAN

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- Professor of Nursing at University of California, San Francisco
- PhD from University of California, Berkeley
- Published more than 125 articles
- CMS expert advisory panel for the Five Star Rating System

# Harrington Hybrid Model

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- To be published late this summer in peer reviewed publication.
- Lead author: **Dr. Charlene Harrington**
- Mary Ellen Dellefield, PhD, RN
- Elizabeth Halifax, PhD, RN
- Mary Louise Fleming, PhD, RN
- Debra Bakerjian, PhD, APRN

# Harrington Hybrid Model

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## 1995-1997 (STM)

- RN
- LPN

## Schnelle Model

- CNA



# What data is needed?

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- Every RUG score for every person in the building, every day you are interested in.
  - 9 times out of 10 defense will screw up this production
- Census for every day
- Chances are you will almost never get proper production and it would be cost prohibitive to do the calculations by hand.
- Unfortunately, doing expected vs. actual staffing on a case by case basis is no longer feasible for the average practitioner.

# Solution

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- I have been suing CMS since the summer of 2017 for all MDSs filed in the United States since January 2012. They have incorrectly produced it twice, they are working on third production now.
- I currently have usable data for 2017-2019.
- We are currently writing the software to do the calculations on a massive scale. (Daily expected staffing for every facility in the country).

## Solution (cont.)

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- We are in discussions with CANHR and a couple of other non-profits to create a “compare” website where the new expected staffing calculations will be published.
- All the facilities in the country will be notified about the website and encouraged to consult it for staffing information.
- We will be housing an original copy of the MDS data from CMS with a third party “lockbox” to preserve authenticity.

# Harrington Hybrid Model

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- RN and LPN staffing will stay the same.
  - Most for-profits will have chronic RN understaffing and LPN overstaffing
- CNA expected staffing will increase between 15% to 90% depending on the RUG.

# PDPM

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- Completely different way of evaluating residents.
- Only 25 nursing categories instead of the 66 RUGs.
- CMS published a Crosswalk in the MDS 3.0 RAI Manual v1.17.1 (Oct. 2019), Chapter 6
- Harrington, et. al., article will include a time table for PDPM nursing scores.

## Ernest C. Tosh

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