

GIVING MEANING TO THE SQUIGGLES ON A PIECE OF PAPER, AKA SCHEDULING

PARTICIPANT WORKBOOK

April 22-25, 2024 | Canmore, AB

ABOUT THE WORKSHOP

Learning Objectives

During this workshop, participants will have the opportunity to:

- > Understand scheduling provisions to enable them to review employer developed schedules for compliance with their collective agreement.
- > Understand scheduling provisions to enable them to assist with scheduling questions.
- > Apply UNA Procedures to scheduling provisions that require mutual agreement.
- > Understand the scheduling checker process for LROs and the relationship with Local monitoring

Workshop Offerings

Each participant will attend 3 workshops over the course of the Labour School.

- > Truth & Reconciliation: The Blanket Experience
- > Inclusive Workplaces / Inclusive Communities
- > Mental Health, Addictions, & Return to Work
- > Giving Meaning to the Squiggles on a Piece of Paper, AKA Scheduling
- > Does It Really Say That?: Contract Interpretation
- > Communicating with Management



SUMMARY OF SCHEDULING PROVISIONS DOCUMENT CAN BE FOUND IN WWW.UNA.CA/DOCUMENT /SCHEDULING

Summary of Scheduling Provisions

APRIL 2024



NOTE: This is a summary document meant for quick reference and guidance only. Always refer to the UNA:AHS 2020-2024 agreement for specific language.

Table of Contents

General Provisions for Full-time and Part-time Employees. – Articles 7, 30, and 37	3
Letter of Understanding #23 Re: Alternate Extended Work Day Scheduling Option	6
Article 12: Seniority	
Line Selection	
Letter of Understanding #10 Re: Scheduling	8
Agreement to Amend the Minimum Hours Off Duty by up to 2 hours pursuant to Letter of Understanding #10	9
Rotation Checklists	10
How to calculate the full-time equivalent (FTE) of a Part-time Employee.	18
Mutual Agreements	21
Extended Work Day List	22
Example – Extended Work Day List	23
Schedule Checker Procedure	24
Schedule Exercises and Keys	25
Shift Work Health Effects And Control Measures	30

DEFINITIONS:

Week:

Seven consecutive days commencing at oooo hours on a day determined by the Employer. The first day of the week must be noted on the schedule.

Weekend:

A Saturday and the following Sunday, with a minimum of <u>56</u> hours off duty, provided not more than one hour is worked on the Sunday. This ensures that if you work late on the Friday (E) before the weekend, you will have two full days off and not return to work until the evening shift on Monday at the earliest. In addition, you wil not be required to return to work on Sunday night if a day shift was worked the previous Friday.

Extended Weekend:

A Saturday and the following Sunday, assuring a minimum of 79.75 hours off duty, provided that not more than one hour is worked on the final day of the extended weekend. This assures additional time off either before or after Saturday and Sunday.

Designated Days of Rest:

Sometimes called 'X' or 'O' days, they are days where a nurse is specifically scheduled not to work.

GENERAL PROVISIONS FOR FULL-TIME AND PART-TIME EMPLOYEES.

- ARTICLES 7, 30, AND 37

SCHEDULE POSTING:

Shift schedules are to be posted 12 weeks in advance, unless there is a previous agreement between the Union and Employer for a shorter period. Upon request the Employer is to provide a copy of each shift schedule to the Union.

Employees should have letters of hire which include the number of hours per shift and number of shifts per shift cycle. Shift schedules need to provide exactly what letters of hire specify.

The Collective Agreement does not require any specific labeling system. "N" under the word "Monday" may mean the Employee starts work at 2300 hours Sunday or may mean the Employee starts work at 2300 hours on Monday. Prior to looking at any schedule, it is vital to know what labeling system is being used.

SCHEDULE CHANGES:

Once posted schedules can be changed (changes should be limted, not extensive). If less than 14 days notice is provided, the 2X penalty rate applies for the first shift of the changed schedule or for working on what would otherwise have been their off-duty days.

An Employer cannot unreasonably deny a request for a shift change from a nurse if there is no additional cost during the course of a posted schedule.

Part time nurses can agree to move their scheduled day of rest to other non-scheduled days. The nurse and the Employer must agree each time there is a request for a change.

EMPLOYEE SHIFT EXCHANGE:

Employees can exchange shifts or portions of shifts among themselves, provided there is written agreement between the Employees of the change, there is prior approval from the Employees' immediate supervisor, there are no additional costs to the Employer, and the Employees are given appropriate orientation. When the exchange of a full shift involves a designated day of rest, the day of rest will also be moved. The designated day of rest will not be moved if only a portion of shift is exchanged.

REPORTING PAY:

If you show up for work and the Employer sends you home, you should receive 4 hours pay at the applicable rate, not including shift or weekend premiums. If less than 4 hours remain in the shift and you are sent home, you shall be paid for the remaining hours of the scheduled shift at the applicable rate of pay, not including shift or weekend premiums. You should also receive reimbursement for any legitimate transportation costs you incurred coming into work. This is not applicable if your start time is changed.

SUMMARY OF SCHEDULING PROVISIONS FOR FULL-TIME AND PART-TIME AND EXTENDED WORK DAY NURSES • ARTICLES 7, 30, AND 37

APRIL 2024

7.75 HOUR ROTATIONS

REGULAR HOURS OF WORK

Shifts are 7.75 hours per day (though part-timers may work less than 7.75 hours), with an average of 36.81 hours worked over a four-week shift cycle (7.75 hrs/day x 19 days ÷ 4 weeks) for full-time. All full-time shift cycles must be a multiple of four weeks. The 7.75 hour shift includes two, paid 15-minute rest breaks scheduled by the Employer and one unpaid 30-minute meal period. A request for a longer meal period will not be unreasonably denied.

SCHEDULING RULES:

For Full-time and Part-time Employees, available shift patterns include: days/evening/nights (which the Employer is obligated to minimize); evening/days; nights/days or permanent days. Unless otherwise agreed, you are to be assigned at least 2/5 of the shift cycle as day duty, unless it is mathematically impossible to achieve.

Permanent evenings, permanent nights, and nights/ evenings are available at your request. If you have worked any 'by request' shift patterns for more than 12 months, you can 'revert' back to one of the other regular shift patterns by giving notice to the Employer. After checking with any other Employees working 'by request' shift patterns, the Employer will post a new shift schedule within 12 weeks of the initial request.

The Employer is to try to minimize changing different shift patterns between days of rest, and to provide at least 47.75 hours off between a night shift and day shift.

If you worked a full-time or part-time position prior to the coming into effect of this agreement that provided either at least 50% day duty or 9 weekends off out of 12, averaged over a complete shift cycle, then these provisions should still continue unless there is a change in the delivery of client care.

Average weekly hours = 36.81 or 19 shifts in 4 weeks. Shift cycles MUST be 4 weeks or in multiples of 4 weeks.

The Employer cannot refuse to implement a compliant shift schedule created by employees and the local as long as it does not result in additional costs.

STANDARD PROVISIONS:

- ▶ At least 15 hours off duty between shifts
- ▶ At least 2 consecutive days of rest i.e. no single days of rest are permitted.
- ▶ Not more than 6 consecutive scheduled days of work
- ▶ Days of rest on half of the weekends in a complete shift cycle without working more than two consecutive weekends, with one extended weekend in each 4-week period where possible.
- ▶ Where possible, you should not have to work beyond 1800 hours before your designated days of rest when your designated days of rest fall on a weekend.
- ▶ If the Employer violates any of the provisions above, you should receive 2x your basic rate of pay for all time worked during the period of violation.

For **Part-time Employees**, the provisions are the same except:

- ▶ Part-time Employees will have 9 designated days of rest (the same number as a Full-timer) every 4-week period, which can be exchanged with non-designated days with no penalty if the Employee agrees.
- ▶ Part-time Employees may choose to work an extended workday shift without attracting overtime when replacing another extended workday Employee.

OPTIONAL PROVISIONS

Option I and II shift schedules can only be implemented with agreement between the Union and the Employer.

Option I:

Option I differs from the standard provision by providing days of rest on alternate weekends, but allows working up to 7 consecutive scheduled shifts in a row, once every 4-week shift cycle. Part-time Employees will have 9 designated days of rest every 4-week period, which can be exchanged with non-designated days with no penalty if the Employee agrees.

Option II:

As a holdover from a previous agreement, Option II does not really appear to provide any benefit under the current scheduling provisions. It gives the same weekends off as the standard provision, but you can end up working up to 7 days in a row, twice in a 6-week period. Part-time provisions are the same as in Option I.

ARTICLE 37: EXTENDED WORK DAY

STANDARD EXTENDED WORKDAY PROVISIONS

There must be a signed agreement between the parties to implement Article 37 schedules that includes the applicable nursing unit, applicable positions, and the applicable extended workday options. Either party can terminate the agreement with 12 weeks written notice. Where a change occurs, the resulting changes to hours per shift and shifts per shift cycle for part-timers will not be considered a violation of Article 30.01(a).

- ▶ At least 22.5 hours off duty on a shift change over between extended shifts
- ▶ At least 2 consecutive days of rest per week
- Not more than 4 consecutive extended shifts, nor more than 4 extended shifts per week.
- *Most extended workday schedules run Sunday to Saturday in order to avoid having more than 4 extended shifts per week.
- ▶ 2 weekends off duty in each 4 week period, where a weekend is Saturday and the following Sunday with at least 59 hours off. Where possible, 1 weekend in each 4-week period will be an extended weekend (Saturday and the following Sunday) with a minimum of 79.75 hours off duty.
- ▶ Employees shall not be scheduled to work more than 2 consecutive weekends unless it is not possible to assign available shifts using only regular employees.
- Where possible, you should not have to work beyond 2000 hours on the day preceding your designated days of rest when they fall on a weekend.

11.08 HOUR EXTENDED WORK DAY

Shift is 11.08 hours = 11 hours and 5 minutes. Average of 36.93 hours worked per week over one complete 6-week shift cycle (11.08 x 20 shifts \div 6 weeks). Time in the hospital shall not exceed 12 hours and 15 minutes. Shift cycles MUST be 6 weeks or in multiples of 6 weeks.

Regular Hours of Work:

Shifts are 11.08 hours per day, and will include three, paid 15-minute rest breaks scheduled by the Employer and either two 30-minute or two 35-minute unpaid meal periods, at the Employers discretion. Two or more rest and meal periods may be combined by agreement.

With 2, 30-minute meal breaks, you will spend 12 hours and 5 minutes at work with a 5-minute report.

With 2, 35-minute meal breaks, you will spend 12 hours and 15 minutes at work with a 15-minute report.

An average of at least 3 designated days of rest per week for a total of 22 designated days of rest in 6 weeks.

If you are working a nights/days rotation, where possible you should get at least 47.75 hours off when changing from a night shift to a day shift.

Half of the shifts should be day duty.

9.75 HOUR EXTENDED WORK DAY

Shift is 9.75 hours = 9 hours and 45 minutes. Average of 37.05 hours worked per week over one complete 5-week shift cycle $(9.75 \times 19 \text{ shifts} \div 5 \text{ weeks})$.

Regular Hours of Work:

Shifts are 9.75 hours per day and will include three, paid 15-minute rest breaks scheduled by the Employer and one unpaid 30-minute meal period. A request for a longer meal period shall not be unreasonably denied. Two or more rest and meal periods may be combined by agreement.

An average of at least 3 designated days of rest per week for a total of 16 designated days of rest in 5 weeks.

2/5 of the shifts day duty

SCHEDULING RULES:

Available shift patterns include nights/days or permanent days.

Permanent nights are only available at the request of the Employee (applying on a position with permanent nights is the same as requesting it). If you have worked any 'by request' shift patterns for more than 12 months, you can 'revert' back to one of the other regular shift patterns by giving notice to the Employer. After checking with any other Employees working permanent nights, the Employer will post a new shift schedule within 12 weeks of the initial request.

Letter Of Understanding #23 Re: Alternate Extended Work Day Scheduling Option

Option III: 11.08 Hour Extended Work Day (4 On/4 Off)

- ▶ 36.93 hours per week averaged over one (1) complete Cycle of the 24-week Shift Schedule
- ▶ Shift patterns-permanent days, permanent nights (only by Employee request) or days and nights rotation as follows:
 - · two day Shifts followed by two night Shifts or
 - · three day Shifts followed by one night Shift; or
 - a combination of the above.

ARTICLE 12: SENIORITY

12.02 (a) (i) selection of newly created shift schedules of the same full-time equivalency, subject to Article 7: Hours of Work and Scheduling Provisions. For "at" Employees the selection to occur within the unit, for "at or out of" Employees the selection to occur within the program and site. This provision shall not be used to change from the standard workday to the extended workday (or *vice versa*). For the purposes of administering this provision an Employee may not secure a shift pattern of another Employee with a shift pattern described in 7.02(d)(iii), (iv), and (vi); and

Applicable when a new rotation is developed.

(ii) selection of vacant shift schedules of the same full-time equivalency, by regular Employees of the Unit, Program or Office, subject to Article 7: Hours of Work and Scheduling Provisions. For "at" Employees the selection to occur within the unit, for "at or out of" Employees the selection to occur within the program and site. For Employees in temporary positions, this provision shall not be used to change from the standard workday to the extended workday (or vice versa).

Applicable when there is a vacant line in a rotation.

LINE SELECTION

Prior to implementing or posting a new Shift schedule the Employer shall have discussions with the Local regarding the upcoming new schedule.

The Parties shall agree on a reasonable time frame required for line selection (some factors to consider would include historical practice, the number of Employees, number of Employees in the identical FTE, the magnitude of the change, the time of year).

Should the Parties be unable to agree on the time frame for line selection, the matter shall be referred to Dispute Resolution Advisory Committee (DRAC), who shall meet within one (1) week, via telephone conference call and agree on the time frame for line selection.

If the DRAC is unable to agree on the time frame for line selection, the matter shall be immediately referred to an

arbitrator on the roster in the Collective Agreement. The selection of the arbitrator shall be made by the DRAC representatives that heard the issue in the mediation. The matter will be dealt with via conference call of no more than two hours and the arbitrator shall immediately determine the time frame for line selection. Such decision shall be final and binding and there will be no written decision.

The schedule shall then be posted and line selection shall take place during the specified time frame.

The 12 week advance notice of the new shift schedule shall begin once line selection is complete.

Should an Employee be unable or unwilling to select their line within the specified time frame, such Employee shall forfeit their right to line selection.

Letter of Understanding #10 Re: Scheduling

For the purposes of Article 7: Hours of Work and Scheduling Provisions, the parties agree to the following:

- Article 7.02(a) shall apply as written, but does not obligate the Employer to any specific labelling system. However, for Employees working night Shifts, at no time shall an Employee be scheduled to work more than one hour on a day considered to be a scheduled day of rest.
- 2. For the purposes of Article 7.02(g)(ii) "two consecutive days of rest" shall mean:

For Employees moving from day shift to day shift - two complete calendar days off, ensuring a minimum of 63.75 hours off duty.

For Employees moving from day shift to evening shift - two complete calendar days off, ensuring a minimum of 71.75 hours off duty.

For Employees moving from day shift to night shift - one complete calendar day off, one day where no more than one hour is worked ensuring a minimum of 55.75 hours off duty.

For Employees moving from evening shift to day shift - two complete calendar days, ensuring a minimum of 55.75 hours off duty.

For Employees moving from evening shift to evening shift - two complete calendar days, ensuring a minimum of 63.75 hours off duty.

For Employees moving from evening shift to night shift - one complete calendar day off, one day where no more than one hour is worked, ensuring a minimum of 47.75 hours off duty.

For Employees moving from night shift to day shift - two complete calendar days off, ensuring a minimum of 71.75 hours off duty.

For Employees moving from night shift to evening shift - two complete calendar days, ensuring a minimum of 79.75 hours off duty.

For Employees moving from night shift to night shift -one complete calendar day off, one day where no more than one hour is worked, ensuring a minimum of 63.75 hours off duty.

- 3. "Week" shall mean seven consecutive days commencing at 0000h, on a day determined by the Employer. The first day of the week shall be noted on the schedule and may be changed by providing 12 weeks' notice.
- 4. The Employer and the Local may mutually agree to amend the minimum of hours off duty by up to 2 hours. The Local shall not unreasonably deny a request to amend the minimum of hours off duty.

UNA/AHS April 1, 2020-March 31, 2024

AGREEMENT TO AMEND THE MINIMUM HOURS OFF DUTY BY UP TO 2 HOURS PURSUANT TO THE LETTER OF UNDERSTANDING # 10

Fill in the applicable blank(s) with the amended number of hours off as agreed by the parties.

Local #:	
Applicable Unit, Program or Site:	
For the purposes of Article 7.02(g)(ii) "two (2) consecutive days of a	est" shall mean:
(a) For Employees moving from day Shift to day Shift – two (2) con hours off duty.	nplete calendar days off, ensuring a minimum of
(b) For Employees moving from day Shift to evening Shift – two (2 hours off duty.) complete calendar days off, ensuring a minimum of
(c) For Employees moving from day Shift to night Shift – one (1) cotthan one (1) hour is worked ensuring a minimum of hours off	
(d) For Employees moving from evening Shift to day Shift – two (2 hours off duty.) complete calendar days, ensuring a minimum of
(e) For Employees moving from evening Shift to evening Shift – tw hours off duty.	o (2) complete calendar days, ensuring a minimum of
(f) For Employees moving from evening Shift to night Shift - one (more than one (1) hour is worked, ensuring a minimum of ho	
(g) For Employees moving from night Shift to day Shift – two (2) c hours off duty.	omplete calendar days off, ensuring a minimum of
(h) For Employees moving from night Shift to evening Shift – two hours off duty.	2) complete calendar days, ensuring a minimum of
(i) For Employees moving from night Shift to night Shift – one (1) than one (1) hour is worked, ensuring a minimum of hours of	
ON BEHALF OF THE EMPLOYER ON BEHA	LF OF THE UNION
DATE DATE	

7.75 CHECK LIST 36.81 hours/week

(Standard Main Body Provision)

Other Mutual Agreements										
2/5 days										
Not more than 6 Consecutive Shifts.										
Permanent Shift Requested										
Where possible, + One Weekend 79.75 hours Saturday/Sunday every 4 weeks										
Rest day on 1/2 weekends not more than 2 consecutive scheduled.										
Rest Days 9 in 4 wks (see letter of understanding #10 Re: Scheduling) FT- at least 2 consecutive. PT- "an average of" at least 2 consecutive days per week.										
15 hrs. off duty										
# of Shifts in 4 weeks (or# of weeks in cycle divisable by 4)										
FTE										
	~	7	m	4	rv	9	7	∞	6	10

LABELING SYSTEM FOR SHIFTS_

WEEK BEGINNING_

11.08 ROTATION CHECK LIST 36.93 hours/week

(Standard Main Body Provision) Other Mutual Agreements 1/2 Days 4 Consecutive Shifts. Not more than 4 per week Not more than Permanent Shift S Requested Where possible, One Weekend 79.75 hours Saturday/ Sunday every 4 weeks 2 Weekends offin 4 Saturday/ Sunday 59 hours Rest Days
22 in 6 weeks
FT - at least 2 consecutive
per week. PT - " an
average of" at 3 per week,
at least 2 consecutive. off duty between shift changeover 22.5 hrs. # of Shifts
in 6 weeks
(or # of weeks in
cycle divisable by 6) LABELING SYSTEM FOR SHIFTS WEEK BEGINNING 10 7 က 4 2 9 ∞ 6

SUMMARY OF SCHEDULING PROVISIONS FOR FULL-TIME AND PART-TIME AND EXTENDED WORK DAY NURSES • ARTICLES 7, 30, AND 37

APRIL 2024

7.75 ROTATION CHECK LIST 38.75 hours/week

Rest day on 1/2 weekends - not more than 2 consecutive 5 scheduled	S at t	Sat + Wi	Sat + WI
	Where possible, + One Weekend 79.75 hours saturday/Sunday every 4 weeks	Where possible, + One Weekend 79.75 hours saturday/Sunday Permanent Shiff every 4 weeks Requested	Where possible, + One Weekend 79.75 hours saturday/Sunday Permanent Shift 7 Consecutive every 4 weeks Requested Shifts
Permanent Shift Requested Requested	Not more than 7 Consecutive Shifts 2/5 Days	2/5 Days	

WEEK BEGINNING_

9.75 ROTATION CHECK LIST 37.05 hours/week

(Standard Main Body Provision) Other Mutual Agreements 2/5 Days Permanent Shift than 4 extended Requested shifts per week Not more than 4 Consecutive Where possible,
One extended
Weekend in four
79.75 hours
Saturday/Sunday Saturday/Sunday 59 hours 2 Weekends off in 4 Rest Days 16 in 5 weeks FT - at least 2 consecutive days per week.

off duty between PT- "an average of" 3 per shift change over week, at least 2 consecutive 22.5 hrs. # of Shifts in 5 weeks (or # of weeks in cycle) LABELING SYSTEM FOR SHIFTS 10 2 $^{\circ}$ 4 2 9 ω 6

SUMMARY OF SCHEDULING PROVISIONS FOR FULL-TIME AND PART-TIME AND EXTENDED WORK DAY NURSES • ARTICLES 7, 30, AND 37

APRIL 2024

WEEK BEGINNING

Option 1 1.625 ROTATION CHECK LIST

WEEK BE LABELING	WEEK BEGINNING	FTS				(IV Alberta F	Option I 11.625 ROTATION CHECK LIST (IV Alberta Health Services Edmonton Zone Addendum A – Local 301)	n I 11.62 Edmonton Zor	25 ROTATION ne Addendum	11.625 ROTATION CHECK LIST nton Zone Addendum A - Local 301)
	Ħ	# of Shifts in 6 weeks (or# of weeks in cycle)	22.5 hrs. off duty between shift change over	Rest Days 22 in 6 weeks FT - at least 2 consecutive per week. PT - "an average of" 3 days per week, at least 2 consecutive.	2 Weekends off in 4 Saturday/ Sunday 59 hours	Where possible, one Weekend 79.75 hours Saturday/Sunday	Permanent Shift Requested	Not more than 4 Consecutive Shifts	1/2 Days	Other Mutual Agreements
~										
7										
ю										
4										
5										
9										
7										
∞										
6										
10										

& 11.625 ROTATION CHECK LIST COMBINED 7 75

1	LABELI	LABELING SYSTEM FOR SHIFTS	HIFTS			(IV Alberta l	(IV Alberta Health Services Edmonton Zone Addendum A – Local 301)	Edmonton Zor	ne Addendum	
1		FF	# of Shifts in 6 weeks (no more than 3 regular work day shifts	Rest Days 21 in 6 weeks FT-at least 2 consecutive per week. PT - "an average of" 3 per week, at least 2 consecutive.	2 Weekends off in 4 Saturday/ Sunday 59 hours	Where possible, one Weekend 79.75 hours Saturday/Sunday every 4 weeks	Permanent Shift Requested	Not more than 4 Consecutive Days (Note: Options)	1/2 Days	Other Mutual Agreements
2	~									
2	7									
4	က									
8 8	4									
8 8	Ŋ									
8 8	9									
9 6	7									
10	∞									
10	6									
	10									

Option III 9.75 ROTATION CHECK LIST

WEEKI	WEEK BEGINNING	IIFTS				(IV Alberta l	Option III 9.75 ROTATION CHECK LIST (IV Alberta Health Services Edmonton Zone Addendum A – Local 301)	Option III 9.7 ervices Edmonton Zor	S ROTATION The Addendum	9.75 ROTATION CHECK LIST n Zone Addendum A – Local 301)
	FTE	# of Shifts in 4 weeks (or# of weeks in cycle)	22.5 hours off duty on a shift changeover between extended shifts	Rest Days 12 in 4 weeks FT- at least 2 consecutive per week. PT - "an average of" at least 3 per week, at least 2 consecutive.	2 Weekends off in 4 Saturday/ Sunday 59 hours	Where possible, one Weekend 79.75 hours Saturday/Sunday every 4 weeks	Permanent Shift Requested	Not more than 5 Consecutive Shifts	2/5 Days	Other Mutual Agreements
—										
2										
က										
4										
2										
9										
7										
∞										
6										
10										

APRIL 2024

7.75 ROTATION CHECK LIST 38.75 hours/week

Alberta Health Services Edmonton Zone Addendum B – Local183) Other Mutual Agreements 2/5 Days 6 Consecutive Shifts (Note Options) Not more than Where possible,
One Weekend
79.75 hours
Saturday/Sunday
Requested Weekends Rest days on 2 weekends in a 5 week period (Saturday/Sunday, 56 hours) Rest Days
10 in 5 weeks
15.0 FT- at least 2 consecutive.
PT- "an average of" at least
between shifts # of Shifts in 5 weeks (or # of weeks in cycle) LABELING SYSTEM FOR SHIFTS WEEK BEGINNING 10 2 က 4 2 9 / ω 6

SUMMARY OF SCHEDULING PROVISIONS FOR FULL-TIME AND PART-TIME AND EXTENDED WORK DAY NURSES • ARTICLES 7, 30, AND 37

APRIL 2024

How to calculate the full-time equivalent (FTE) of a Part-time Employee

In order to determine the FTE of a Part-time Employee, the average weekly hours must be determined. So, for example, if you work 7.75 hour shifts and work twelve shifts in a four week shift cycle, you multiply 7.75 (hours) X 12 (shifts) and divide by four (number of weeks). So the average weekly hours are 23.25 hours.

Once you have the average weekly hours for the Part-time Employee, you divide this by the average weekly hours worked by a Full-time Employee.

In this example, if the Full-time weekly hours are 36.81 then divide 23.25 by 36.81 to get the FTE of .6316. This would round down to .63 as the third number is less than 5. If the third number is 5 or greater, the FTE is rounded up.

If the Full-time weekly hours are 38.75 then the FTE is .6

7.75 HOUR SHIFT (36.81 hours/week)

4 WE	EEKS
# SHIFTS	FTE
1	.05
2	.11
3	.16
4	.21
5	.26
6	.32
7	.37
8	.42
9	.47
10	.53
11	.58
12	.63
13	.68
14	.74
15	.79
16	.84
17	.89
18	.95
19	1.0

	8 W	EEKS	
# SHIFTS	FTE	# SHIFTS	FTE
1	.02	20	.53
2	.05	21	.55
3	.07	22	.58
4	.11	23	.61
5	.13	24	.63
6	.16	25	.66
7	.18	26	.68
8	.21	27	.71
9	.24	28	.74
10	.26	29	.76
11	.29	30	.79
12	.32	31	.82
13	.34	32	.84
14	.37	33	.87
15	.39	34	.89
16	.42	35	.92
17	.45	36	.95
18	.47	37	.97
19	.50	38	1.0

		12 W	EEKS		
# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE
1	.02	20	.35	39	.68
2	.04	21	.37	40	.70
3	.05	22	.39	41	.72
4	.07	23	.40	42	.74
5	.09	24	.42	43	.75
6	.10	25	.44	44	.77
7	.12	26	.46	45	.79
8	.14	27	.47	46	.81
9	.16	28	.49	47	.82
10	.18	29	.51	48	.84
11	.19	30	.53	49	.86
12	.21	31	.54	50	.88
13	.23	32	.56	51	.89
14	.25	33	.58	52	.91
15	.26	34	.60	53	.93
16	.28	35	.61	54	.95
17	.30	36	.63	55	.96
18	.32	37	.65	56	.98
19	.33	38	.67	57	1.0

7.75 HOUR SHIFT (38.75 hours/week)

	4 W	EEKS	
# SHIFTS	FTE	# SHIFTS	FTE
1	.05	11	.55
2	.10	12	.60
3	.15	13	.65
4	.20	14	.70
5	.25	15	.75
6	.30	16	.80
7	.35	17	.85
8	.40	18	.90
9	.45	19	.95
10	.50	20	1.0

			8 W	EEKS			
# SHIFTS	FTE						
1	.03	11	.28	21	.53	31	.78
2	.05	12	.30	22	.55	32	.80
3	.08	13	.33	23	.58	33	.83
4	.10	14	.35	24	.60	34	.85
5	.13	15	.38	25	.63	35	.88
6	.15	16	.40	26	.65	36	.90
7	.18	17	.43	27	.68	37	.93
8	.20	18	.45	28	.70	38	.95
9	.23	19	.48	29	.73	39	.98
10	.25	20	.50	30	.75	40	1.0

9.75 HOUR SHIFT (37.05 hours/week)

	5 WEEKS											
# SHIFTS	FTE	# SHIFTS	FTE									
1	.05	11	.58									
2	.10	12	.63									
3	.16	13	.68									
4	.21	14	.74									
5	.26	15	.79									
6	.31	16	.84									
7	.36	17	.89									
8	.42	18	.95									
9	.47	19	1.0									
10	.53											

	10 WEEKS												
# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE						
1	.03	11	.29	21	.54	31	.81						
2	.05	12	.31	22	.58	32	.84						
3	.08	13	.34	23	.60	33	.87						
4	.10	14	.37	24	.63	34	.89						
5	.13	15	.39	25	.65	35	.92						
6	.15	16	.42	26	.68	36	.94						
7	.18	17	.44	27	.71	37	.97						
8	.21	18	.47	28	.73	38	1.0						
9	.23	19	.50	29	.76								
10	.26	20	.52	30	.79								

9.75 HOUR SHIFT (39 hours/week)

4 WEEKS										
# SHIFTS	FTE	# SHIFTS	FTE							
1	.06	9	.56							
2	.13	10	.63							
3	.19	11	.69							
4	.25	12	.75							
5	.31	13	.81							
6	.38	14	.86							
7	.44	15	.94							
8	.50	16	1.0							

8 WEEKS												
# SHIFTS	FTE											
1	.03	9	.28	17	.53	25	.78					
2	.06	10	.31	18	.56	26	.81					
3	.09	11	.34	19	.59	27	.84					
4	.13	12	.38	20	.63	28	.88					
5	.16	13	.41	21	.66	29	.91					
6	.19	14	.44	22	.69	30	.94					
7	.22	15	.47	23	.72	31	.97					
8	.25	16	.50	24	.75	32	1.0					

11.08 HOUR SHIFT

	6 W	EEKS			
# SHIFTS	FTE	# SHIFTS	FTE		
1	.05	11	.55		
2	.10	12	.60		
3	.15	13	.65		
4	.20	14	.70		
5	.25	15	.75		
6	.30	16	.80		
7	.35	17	.85		
8	.40	18	.90		
9	.45	19	.95		
10	.50	20	1.0		

	12 WEEKS												
# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE						
1	.03	11	.28	21	.53	31	.78						
2	.05	12	.30	22	.55	32	.80						
3	.08	13	.33	23	.58	33	.83						
4	.10	14	.35	24	.60	34	.85						
5	.13	15	.38	25	.63	35	.88						
6	.15	16	.40	26	.65	36	.90						
7	.18	17	.43	27	.68	37	.93						
8	.20	18	.45	28	.70	38	.95						
9	.23	19	.48	29	.73	39	.98						
10	.25	20	.50	30	.75	40	1.0						

11.625 HOUR SHIFT

6 WEEKS										
# SHIFTS	FTE	# SHIFTS	FTE							
1	.05	11	.55							
2	.10	12	.60							
3	.15	13	.65							
4	.20	14	.70							
5	.25	15	.75							
6	.30	16	.80							
7	.35	17	.85							
8	.40	18	.90							
9	.45	19	.95							
10	.50	20	1.0							

	12 WEEKS												
# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE	# SHIFTS	FTE						
1	.03	11	.28	21	.53	31	.78						
2	.05	12	.30	22	.55	32	.80						
3	.08	13	.33	23	.58	33	.83						
4	.10	14	.35	24	.60	34	.85						
5	.13	15	.38	25	.63	35	.88						
6	.15	16	.40	26	.65	36	.90						
7	.18	17	.43	27	.68	37	.93						
8	.20	18	.45	28	.70	38	.95						
9	.23	19	.48	29	.73	39	.98						
10	.25	20	.50	30	.75	40	1.0						

MUTUAL AGREEMENTS

Where agreement by the Local or Union is required as per a collective agreement, consult UNA Procedures under "Mutual Agreements - Decision Making on Areas of Collective Agreements."

The current version can be found at www.una.ca/document/procedures.

EXTENDED WORK DAY LIST

Local #:		_	Unit:	
Length of Shift Cycl	e: (#of weeks	3)		
Applicable Option:	Option I: _			
	Option II:_			
	Option: III:	·		
Number of Regular l	Full-time Pos	itions:		
Number of Regular l	Part-time Pos	itions:		
Part-time FT	TE	Number of Po	sitions	Number of Shifts
				in Shift Cycle
ON BEHALF OF THE	E EMPLOYER		ON BEHAI	LF OF THE UNION
DATE			DATE	

22

EXAMPLE EXTENDED WORK DAY LIST

Local #: 432			Unit: _	PCU 32
Length of Shift Cycle:	: (#of weeks)	12 weeks		
Applicable Option:	Option I:	,		
	Option II:			
	Option: III: _			
Number of Regular Fu	ıll-time Posit	ions:		
Number of Regular Pa	art-time Posit	ions:		
Part-time FTF	E	Number of Po	sitions	Number of Shifts
				in Shift Cycle
.53		3		30
.74		1		42
.42		1		24
ON BEHALF OF THE 1	EMPLOYER		ON BEHA	ALF OF THE UNION
DATE			DATE	

Schedule Checker Procedure

- Where possible the schedule should be provided/ received in Excel format.
- 2. The Local or LRO will conduct an initial review of the schedule. The initial review will ensure that the following is clearly indicated on the schedule:
 - a. First day of the schedule
 - Start and end time for each shift on the schedule and the corresponding signifier for that shift (ie. D = 0700-1515; d = 0800-1615)
 - c. Baseline staffing for each day
 - d. Cycle of the shift schedule
 - e. Are 'x' days clearly identified for part time employees
 - f. FTEs of each line
 - g. Clarity regarding nights (ie. Does the 'n' on the schedule signifiy the day the shift starts or the day where the majority of the hours fall)
- 3. The LRO and the Local remain responsible for assessing the schedule's compliance with the employees' letters of hire. The schedule must correspond to the number of hours per shift and Shifts per Shift Cycle set out in the letter of hire.

- 4. Some Labour Relations Assistants receive training to input and run schedules in the checker. Once the schedule includes all of the required information then the LRO will provide the schedule to the assistant to input to the schedule checker.
- 5. When complete, the assistant will provide the results to the LRO who will review the data for accuracy. The schedule checker is not a replacement for the LRO's attention. It is to be used as a shortcut to identify where there may be problems with the schedule.
- 6. **CBA Violations** indicates the violation of the collective agreement. These must be corrected.
- 7. Any errors or concerns with regards to the operation of the schedule checker will be shared by the LRO with their immediate supervisor (ie. Manager of Labour Relations). Any changes to the operation of the schedule checker must be approved by the Manager of Labour Relations. The Manager will communicate the change to the assigned employee in Systems Department who will work with the provider.

Note: The schedule checker is not for use on schedules with fewer than 15 lines. If a schedule has greater than 15 lines, the LRO or Local may choose to use the schedule checker but this is not required

24

EMOJI ROTATION

	S	×	×		
	S	×	×		
	Щ				
WEEK 2	Ь				
	>				
	⊢		© 0	×	×
	Σ		© 0	×	×
	S	×		×	
	S	×		×	
	Щ		×		×
K1	⊢		×		×
WEEK 1	>				
	H				
	Σ				
		Line 1	Line 2	Line 3	Line 4

Shift Legend

0700-1515

1500-2315

8 HOUR WORKSHOP ROTATION

FIND THE VIOLATIONS

	S				Δ	ш	Δ	×	×	×	
	S				Δ	ш	Ω	×	×	×	
4	ш	Ω	ш		Δ	ш	×	Ш		×	
WEEK	-	Ω	ш	z	Δ	Ω	×	Ш	۵		
>	≥	Ω	ш	z	Δ			ш	۵		
	\vdash			z	Δ				۵		
	Σ		ш	z		×			۵	Δ	
	S	Ω	ш	z		×	z	۵	×	۵	
	S	Ω	ш	z		×	z	Δ	×	۵	
_	ш	Δ	ш		Δ	×	z	Δ	ш		
WEEK 3	-	Ω	ш	۵	Δ	×	×	×	ш		
₹	≥	Ω	ш	۵	Δ		×	×	ш		
	Н			Δ		ш			ш	×	
	Σ		Δ	۵		ш				×	
П	S	z			z	×	×	×	×	۵	
	S	z			z	×	×	×	×	Δ	
	ш	z		Δ	z	×	z	×			
WEEK 2	Н	z	ш	۵	z	×	z		z		
×	≥	z	Δ	۵	z	Δ	۵	Δ	z	۵	
	Н	z	Δ		z			Δ	z	×	
	Σ		۵			Δ		Δ	z	×	
П	S		۵	z		Δ	×	×	×	×	
	S		۵	z		Δ	×	×	×	×	
	ц	Ω		z	z		×			۵	
WEEK 1	⊢	Ω		z	z	Δ	z		۵	۵	
W	≥	Δ	Δ	z	z	Ω	z	Δ	۵		
	ь	Δ	Δ	z	z	۵	۵	Δ	۵	z	
	Σ	Ω	Δ	z			Δ	Δ	۵	z	
	FTE	1.00	1.00	1.00	1.00	0.63	0.63	0.63	0.84	0.53	
PLAN	ш		-	_					-		
		D/N	D/E	D/N	N/O	D/E	D/N	D/E	D/E	D/N	
	EMPLOYEE	Nicole	Heather	Richard	Emily	Julie	Tom	III (Laurie	Kris	

E-1500-2315

D-0700-1515

N-2300-0715

A-0700-1915

B-1900-0715

26

APRIL 2024

Rotation:	12 hr workshop rotation
CBA:	UNA
Format:	ESP
Start Day:	Sunday

12 HOUR WORKSHOP ROTATION

											Week 1	I					Week 2	2					Week	3					w	eek 4					We	ek 5						Week 6											
ID	Notes	AFTE	CFTE	SFTE	Туре	Option	Shifts	N	М	т	w	R	F S	5 1	M M	т	w	R	F	s	N	м т	· w	R	F	s	N	м	т	w	R	F S	N	М	т	W R	F	s	N	М	т	w	R	F	s To	tal X	DX	(NX	RWE	O XWE	WEN	c ww	%Day
								1	2	3	4	5	6 7	7 8	3 9	10	11	12	13	14	15	16 17	7 18	19	20	21	22	23	24	25	26	27 28	29	30	31	32 33	3 34	35	36	37	38	39	40	41 4	42								
1		0.80	0.80	0.80	ext11.08	0	DX,NX	NX NX		х		NX N	IX N	X N	х		х	х	х	OX E	ОΧ	x x	×			х	х	x	х	NX	NX	х	×	NX	NX	×	х	х	х	DX	DX	DX	x	х г)X 1	6 18	7	9	0	3	0	3	44
2		0.60	0.60	0.60	ext11.08	0	DX,NX	х	х	х	DX	DX 3	(X	()	х	х	DX	DX	DX	x :	х	x	NX		х	х	х	NX	NX		x x	NX NX			х	x	х			х	х		DX D	ox :	x 1	2 22	2 7	5	0	5	0	1	58
3		1.00	1.00	1.00	ext11.08	0	DX,NX	DX	DX	DX	х	DX D	х	. >	XN	NX	NX		NX	х :	х	X D	X DX	х	х	DX	DX		х	х	х	X DX	DX		х	х	NX	NX	NX		х	XNX	NX	>	X 2	18	11	1 9	1	0	0	5	55
4		0.60	0.60	0.60	ext11.08	0	DX,NX	х	х	х	х	х	N	X N	x	х	х	DX	DX [ox :	х	X N	x NX			х	х			х	х	DX	DX	х	х	х х	х	х	х			х	X N	ΔX N	VX 1	2 21	6	6	0	2	0	4	50
5		0.40	0.40	0.50	ext11.08	0	DX,NX	:	NX	NX		x >	< x	×	×	х	х	NX	NX I	٧X		х		DX	DX	х	х			х	х	x		х	х	к х	DX	DX	DX	х	х			x ×	X 1	22	. 5	5	0	4	0	2	50
6		0.40	0.40	0.35	ext11.08	0	DX,NX	х	х	х		,	< x	×	DX	DX		х	х	١	NX I	1X	х	х	х	х	х			х	х			х	х	X DX	(х	х	х			x :	X D	X 7	22	. 5	2	0	4	0	2	71
7		0.40	0.40	0.50	ext11.08	0	DX,NX		DX	DX	х	x 2	<			х	х			x :	x i	х	X	NX	NX			х	х	DX	DX	x x	х	DX	DX	х	х	х	Х	NX	NX		x :	x 2	X 1	0 22	2 6	4	0	5	0	1	60
8		0.40	0.40	0.35	ext11.08	0	DX,NX	(х	Х	X D	X D	x x	х				x :	х		х	х		NX	NX		х	х	х	x x	х	х	х	IX N	(х	Х	х	х			x 2	х 7	22	. 3	4	0	4	0	2	43
Icon	Name	Measure	Start	End	Hours	Paid																																															
х	Day off	Actual						3	3	4	4	4	4 4	1 4	3	5	4	2	2	4	5	5 3	4	3	3	5	5	2	4	5	6	5 3	3	4	6	3 5	4	5	5	4	4	2	4	5	5 16	7							
DX		Required	7:00	19:15	12.25	11.08		1	1	1	1	1	1 1	1	1	1	1	1	1	1	1	1 1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1 1	1	1	1	1	1	1	1	1	1 4	2							
		Actual						1	2	2	1	2	2 1	1	1	1	1	2	2	2	1	1 1	1	1	1	1	1	0	0	1	1	0 2	2	1	1	2 1	1	1	1	1	1	1	1	1 :	2 5	D							
NX		Required	19:00	7:15	12.25	11.08		1	1	1	1	1	1 1	1	1	1	1	1	1	1	1	1 1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1 1	1	1	1	1	1	1	1	1	1 4	2							
		Actual						1	1	1	0	1	1 2	2 2	1	1	1	1	2	1	1	1 1	2	1	1	1	1	1	1	1	1	1 1	0	1	1	1 1	1	1	1	1	1	1	1	1	1 4	4							

8 Hour Schedule key

Identification of collective agreement violations contained in the workshop rotation

The first day of the week is not noted on the schedule—it is Monday.

Reference Letter of Understanding Re: Scheduling

The Employees names should not be assigned to lines on a newly created shift schedules.

Reference 12.02 (a) (i)

What does (N) mean for reporting purposes?

N means come into work on the day the N is under for example, N under Wednesday means you come in on Wednesday at 2300 and work till Thursday at 0715

NICOLE:

- Week 3-does not get 2 consecutive days of rest (working until 0715 on Monday so Monday is considered a workday.)
- ► References Article 7.02 (g) (ii), Letter of Understanding Re: Scheduling

HEATHER:

- Week 2-where possible, Employees shall not be required to work beyond 1800 hours on the day proceeding the designated days of rest when designated days of rest fall on a week-end.
- ▶ Reference Article 7.02 (g) (iii)
- ▶ Week 3-does not have 2 consecutive days of rest.
- ▶ Reference Article 7.02 (g) (ii)
- Week 4-does not have 56 hours off over the weekend and does not have 2 consecutive days of rest.
- ▶ Reference Article 7.02 (g) (ii) and (iii)

RICHARD:

- ▶ Week 1-works 7 consecutive shifts.
- ▶ Reference Article 7.02 (g) (iv)
- ▶ Week 2-does not have 2 consecutive days of rest as works Monday.
- ▶ Reference Article 7.02 (g) (ii)
- ▶ Not enough day shifts (2/5)
- ▶ Reference Article 7.02 (f)
- ▶ Too many shifts.
- ▶ Reference 7.01 (a) (ii)
- ▶ No extended week-end.
- ▶ Reference 7.02 (g) (v)

EMILY:

- Week 1-works on Saturday which is her scheduled weekend off.
- ▶ Reference Article 7.02 (g) (iii)
- ▶ Week 3-does not have 2 consecutive days of rest as Monday is a workday. Reference Article 7.02 (g) (ii)

JULIE:

► Too many shifts for a .63 FTE.

TOM:

- ▶ No extended weekend.
- Week 2-working on Saturday which is his scheduled weekend off.
- ▶ Reference Article 30.01 (b) amending 7.02 (g) (iv)

JILL:

► Has a compliant shift schedule.

LAURIE:

- ▶ Only 8 scheduled days of rest. No extended weekend.
- ▶ Scheduled to work a days, evenings and nights rotation.
- ▶ Reference Article 7.02 (d) (i)

KRIS:

- Week 1-different shift patterns between designated days of rest.
- ▶ Reference Article 7.02 (d), last paragraph

12 HOUR WORKSHOP ROTATION - VIOLATION KEY

cba106 T			Day rositions		,	ext
		ć	13	က		
	I ne day after a night shift cannot be a designated day off.	CBA	42	4		
_	Employees must work their designated FTE: this employee is working too many hours per week			2		
cba304 o	on average." - Article 37.02 Option I(A) amending 7.01(a)(ii) and 37.02 Option I(D) amending 30.01(a) amending 7.01(a)(i)	CBA		7		
Ш	Employees must work their designated FTE: this employee is working too few hours per week			9		
cba305 o	on average." - Article 37.02 Option I(A) amending 7.01(a)(ii) and 37.02 Option I(D) amending 30.01(a) amending 7.01(a)(i)	CBA		8		
	Employees shall have 1 extended weekend in each 4 week period" - Article 7.02(g)(v); 37.02	ć		က		
CDa313	Option I/II(C) 7.02(g)(v) 30.01(b) amending 7.02(g)(v); 37.02 Option I/II(E) 30.01(b)	CBA	29	က		
			29	_		
S	Shift schedules shall provide for two (2) weekends off duty in each four (4) week period"		-	m		
cba325 -	- Article 37.02 Option I(C) and II(C) and III(C) amending	CBA	29	က		
7	7.02(g)(iii) 37.02 Option I(E) and II(E) and III(E) amending 30.01(b) 7.02(g)(iii)			4		
			29	4		
	Shift schedules shall provide for not more than four (4) consecutive extended Shifts nor more than			က		
coa4 I I	four (4) extended Shifts per week" - Article 37.02 Option I and II (C,E) amending 7.02(g)(iv)	CBA	80	4		
	Employees who are required to rotate Shifts, shall be assigned day duty 1/2 of the time during the	Š		_		
CDaoUS	Shift cycle" - Article 37.02 Option I (C): 7.02(f)	CBA		∞		
	At least two (2) consecutive days of rest per week" - Article 37.02 Option I(C,E) and Option II(C,E)	Š	_	_		
coa/o/	amending 7.02(g)(ii)	CDA	~	m		
	Extended I part-time employees will have a total of 22 designated days of rest in a 6-week period"	Š	_	-		
cba/TI	- Article 37.02 Option I(E) amending 30.01(b) amending 7.02(g)(ii)	CBA	_	4		

SHIFT WORK

Health Effects And Control Measures

WHAT IS SHIFTWORK?

Work that is scheduled outside "normal" daylight hours (i.e. 9 am to 5 pm) is called "shift work". Shift work schedules can vary from one workplace to another. Workers may rotate through shifts or remain on a single shift (i.e. permanent nights).

WORK HOURS

Some employees work a regular work schedule of 40 hours per week, 8-hour days, Monday through Friday. However, with an increased demand for around the clock services more workers are working shifts out side of a regular work schedule. Of course the requirement for shift work has always been a reality in the health care industry.

Studies have examined the differences between various workweek schedules. When comparing a 5-day/8-hr work schedule to a 4-day/10-hr work schedule, most studies found that workers were more tired at the end of a 10-hr shift. Studies also found workers to be more fatigued

following a 12-hr shift when compared to an 8-hr shift.

Night shifts are also cause fatigue. Mental and physical effects of night work have been shown to affect a worker's concentration, alertness, motivation, and memory. This can slow a worker's reaction time and increase the risk of accident and patient care incidents.

Many workers find that shift work disrupts their family and personal life and leads to health problems including chronic fatigue and gastrointestinal disorders.

CIRCADIAN RHYTHMS

Many human physical functions follow a daily rhythm or a 24-hour cycle. These cycles are called circadian rhythms. The word circadian comes from the Latin "circa dies" which means "about a day". Sleeping, waking, digestion, secretion of adrenalin, body temperature, blood pressure, pulse and many other important aspects of body functions and human behavior are regulated by this 24-hour cycle. These rhythmical processes are coordinated to allow for high activity during the day and low activity at night.

Normally, the body uses cues for it processes and from the environment such a clock time, social activities, the light and dark cycle, and meal times to keep the various rhythms on track.

For example, body temperature is highest during the afternoon and early evening (18:00 hrs) and lowest in the

early morning (04:00 hrs or before sunrise. However, if the person is working at night, the body temperature does not have as much variation during a 24-hour period as it would normally. The temperature and other body rhythms get out of sync; these rhythms also get out of phase with a person's activity pattern. This leads to fatigue and disorientation.

The human body is meant to be active during daytime hours, while during nighttime hours it is meant to sleep which allows it to recover and replace energy. Working at night and sleeping during the day is opposite to the body's "biological" clocks and what the body naturally wants to do. This may make sleeping difficult; it may also mean that the body cannot recover as quickly from physical and mental exertions/demands.

MENTAL AND PHYSICAL PERFORMANCE

Circadian rhythms have been found to be associated with changes in mental and physical performance. Circadian rhythms may partly explain why job performance can vary over a 24- hour period, with a low point occurring very late at night or very early in the morning.

Some basic human physiological functions are depressed during the night, which may suggest that people are not well suited for night work. Performance on the night shift can be affected by:

- ► The type of shift schedule
- The nature of the task(s)
- ▶ The performance demands of the task
- ▶ Adjustments to tasks and shifts
- ► Individual differences

WHAT ARE THE HEALTH EFFECTS OF SHIFT WORK?

Changes to Sleep Patterns

Disruption of both the quality and quantity of the normal sleep is inevitable in shift work particularly where night work is involved. The daytime sleep is seldom as deep or as refreshing as sleep at night. The problem is greater if there is not a quiet, dark, comfortable place to sleep. Even when disturbances are removed, a worker who returns home in the morning may still find sleep impossible or less refreshing. This difficulty occurs because the circadian rhythms are no longer synchronized. Being constantly tired is a typical complaint of shift workers. Shift work can lead to chronic fatigue and insomnia.

Gastrointestinal Disorders

Gastrointestinal and digestive problems such as indigestion, heartburn, stomach ache and loss of appetite are more common among rotating shift workers and night workers than among day workers. It is less clear if more serious conditions such as peptic ulcers are more common in shift workers. Certainly the irregular work, sleep and eating schedules are not helpful for the proper care of ulcers.

Given the irregularity in type and timing of meals, it is not surprising that the night worker is more likely to have a poorer diet. At night, the loss of appetite often leads to increased snacking on "junk" food rather than eating a full, well-balanced meal. Feelings of fatigue may encourage the consumption of beverages with caffeine (coffee, cola) to help the worker stay awake.

Cardiovascular Disorders and Kidney Disease

A study of Swedish men with a history of heart attack showed they were significantly more likely to have been shift workers than those men without a history of heart attack. Another study showed that the modification of shift rotation schedules by changing the direction of rotation of shifts to a forward direction (for example, days -> afternoons -> nights) can significantly decrease the levels of several coronary risk factors, e.g., triglycerides, glucose, and urinary excretion of catecholamines (chemicals like adrenalin that occur naturally in the body).

A recent study published by Dr. Michael Sole. Professor or Medicine and Physiology at the University of Toronto suggests that shift workers may be at risk for increased incidence of heart and kidney disease.

Cancer

The International Agency for Research on Cancer, a subsection for the World Health Organization has added night shift work to the list of probable carcinogens.

Scientists believe that night work is dangerous because it disrupts the circadian rhythm and depresses the production of the hormone melatonin, which can suppress tumor development. Melatonin is normally produced at night when the body is at rest. Having lower melatonin levels can raise the risk of developing cancer.

Reproductive Effects

An increase in Irregular menstrual cycles and menstrual pain were reported from women in a number of industries who worked night shifts, a higher risk of miscarriage, lower rates of pregnancies and deliveries, spontaneous abortion, delayed fetal development, increased risk of pre-term delivery and low birth rates have also been observed in some studies.

Other Health Problems

Workers who require prescription drugs to control certain disorders should be aware that disruption of the circadian rhythm could interfere with the medical treatment of some diseases. Check with your family physician if you take medication while working shifts.

SUMMARY OF SCHEDULING PROVISIONS FOR FULL-TIME AND PART-TIME AND EXTENDED WORK DAY NURSES • ARTICLES 7, 30, AND 37

APRIL 2024

31

Diabetes mellitus and epilepsy are two other health problems that can be exacerbated by shift work since both have been found to be rhythmic in nature.

Periodic variation have been observed in persons with diabetes mellitus, including 24 hour rhythms in the excretion of citric acid and B-hydroxybutyric acid and the production of ammonia in the kidney. These rhythms may affect the production of insulin. In addition, regular food intake and correct timing of medication are highly important and cannot always be achieved under shift work conditions.

Epileptic seizures have also been found to follow a rhythmic pattern in terms of the time of day they occur. One study showed that the incidence of seizures rose steadily from 03:00 hrs to a peak between 18:00 and 19:00 hours with a second highest incidence being between 20:00 and 24:00 hrs. Working night shift and resulting sleep disturbance is believed to increase the incidence of epileptic seizures.

Psychosocial Effects of Shift Work

Compared with people who work straight days, shift workers report more interference to their family lives, especially the time available to spend with spouses and children. This fact is very important since the amount and quality of social interaction is related to physical and mental health. Individuals who cannot establish regular routines in their daily activities have difficulties planning for family responsibilities and coping with physical and mental fatigue as effectively as non-shift workers. Participation in clubs, sports and other organized activities is very difficult since they are usually geared to the normal day schedule. The lack of regular social contact can lead to feelings of loneliness and isolation. In addition, quality childcare facilities aimed at meeting the needs of shift workers is almost nonexistent.

WHAT ARE THE SAFETY CONCERNS ASSOCIATED WITH WORKING SHIFTS?

The causes of accidents are very complicated. Usually, no single factor can be identified as having "caused" an accident. The disturbance of circadian rhythms can affect concentration, motivation, and reaction time, particularly at night. This combination can result in an increased risk of accident and injury.

However, there is disagreement about whether shift workers have a greater risk of injury. Studies can be found to show that shift workers' accident rates are less, the same, or more than day workers. Part of the difficulty with the research is that work conditions are not always the same on different shifts. For example, the amount of supervision, the nature of the workload, the backup systems available, and so on all can vary from shift to shift: these factors can make comparisons inaccurate.

Nonetheless, lack of sleep heightens the decline in performance normally experienced at certain times of the day. When deprived of sleep, a worker is not fully aware that his or her performance has deteriorated. Research has shown that the optimum mental performance level for workers occurs between 2 and 4 p.m. and maximum general awareness is between 1 and 7 p.m. Performance levels are lowest between 3:30 and 5:30 a.m.

REDUCING THE RISKS OF SHIFT WORK

The best solution to the problems of shift work would be to eliminate it but this is not often a practical possibility. Shift work is likely to continue to be a reality for the vast majority of health care workers.

There are two basic levels where improvements can be made:

- ▶ The organizational level primarily through the design of shift schedules, education, more frequent breaks, and other strategies that the employer can implement to reduce the effects of shift work.
- ► The individual level strategies for workers to ensure a better sleep, a healthier diet, regular exercise and social interaction.

What are some organizational changes that can be implemented?

There are several approaches the organization can take to help reduce the effects of shift work. There are also several important considerations for organizations.

Shift Schedule Design:

▶ Optimizing the design of the shift schedule is the most effective way of reducing the health and safety problems. Satisfaction with a particular shift system is the results of a complicated balancing act that is the best compromise for personal, psychological, social and medical concerns.

SUMMARY OF SCHEDULING PROVISIONS FOR FULL-TIME AND PART-TIME AND EXTENDED WORK DAY NURSES • ARTICLES 7, 30, AND 37

APRIL 2024



CONTACTS

PROVINCIAL OFFICE (Edmonton)

5 780-425-1025/1-800-252-9394

SOUTHERN ALBERTA REGIONAL OFFICE (Calgary)

403-237-2377/1-800-661-1802

⊠ nurses@una.ca



www.una.ca



education.una.ca



education.una.ca/labourschool/