

Figure 42. Ensuring children do schoolwork (n=175)

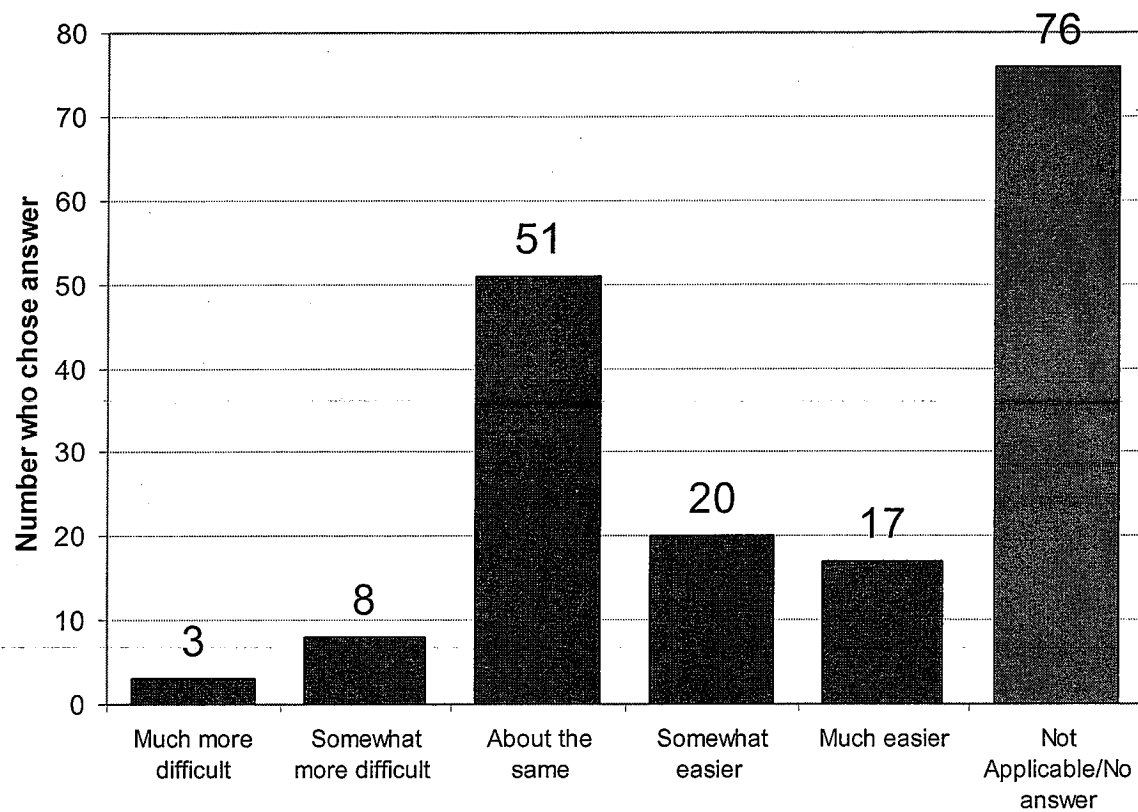
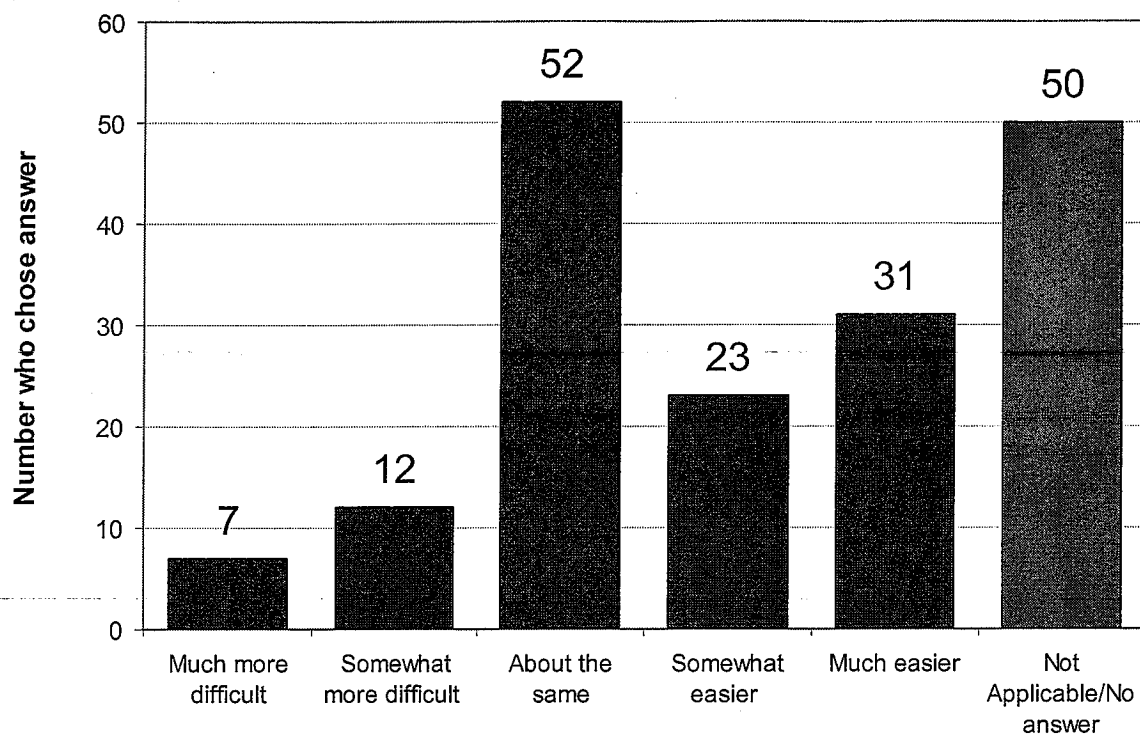


Figure 43. Supervising children's behavior and activities at home (n=175)



**Figure 44. Having children take part in after school activities
(n=175)**

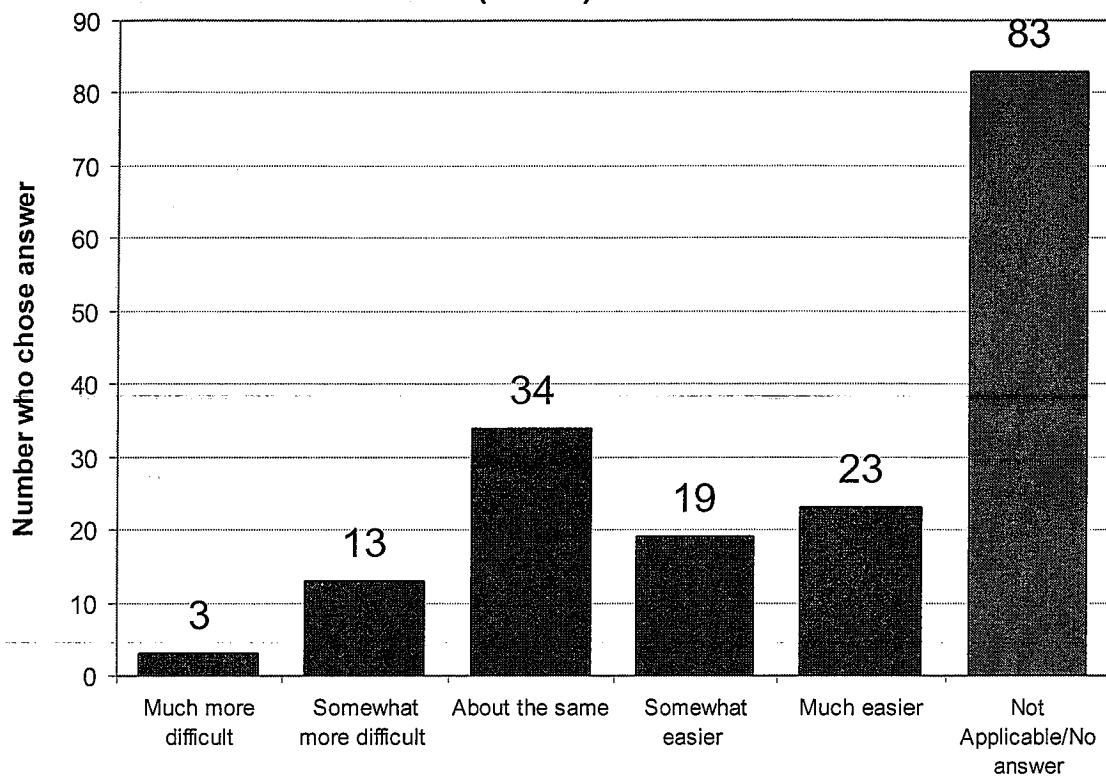
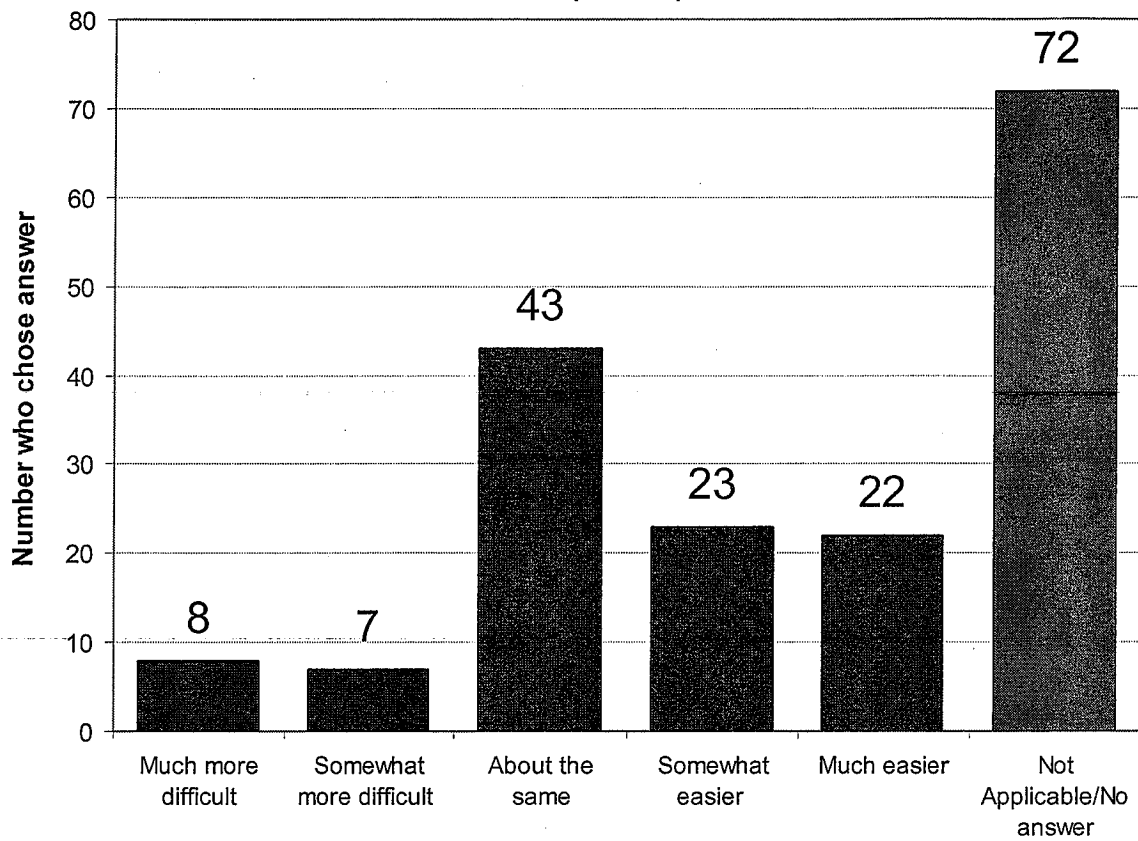


Figure 45. Participating in activities at your child(ren)'s school (n=175)



**Figure 46. The 48/96 schedule creates a strain for our(my)
child(ren) (n=175)**

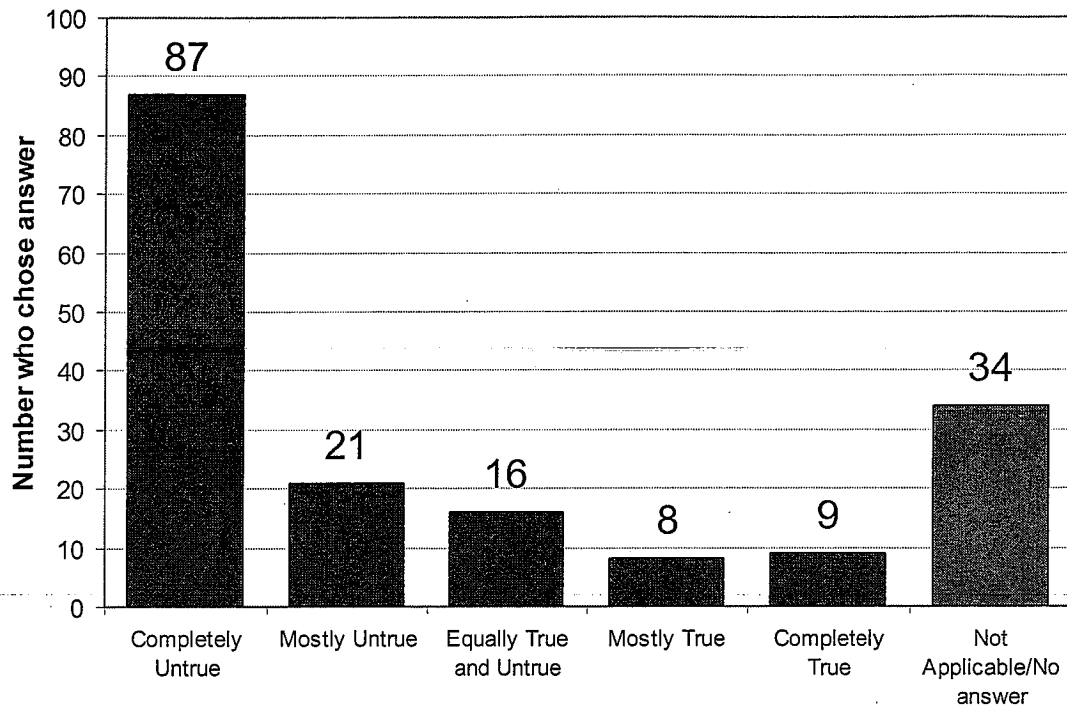


Figure 47. The 48/96 schedule leaves us (me) with too little TIME to be the kind of parent we (I) want to be (n=175)

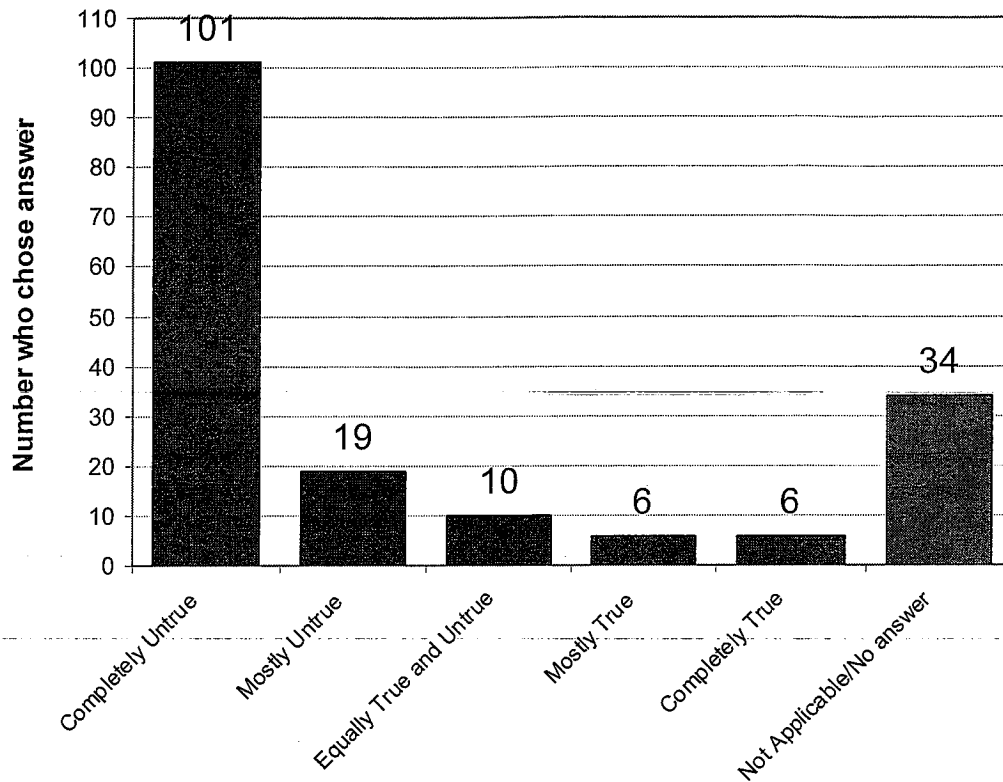


Figure 48. The 48/96 schedule leaves us (me) with too little ENERGY to be the kind of parent we (I) want to be (n=175)

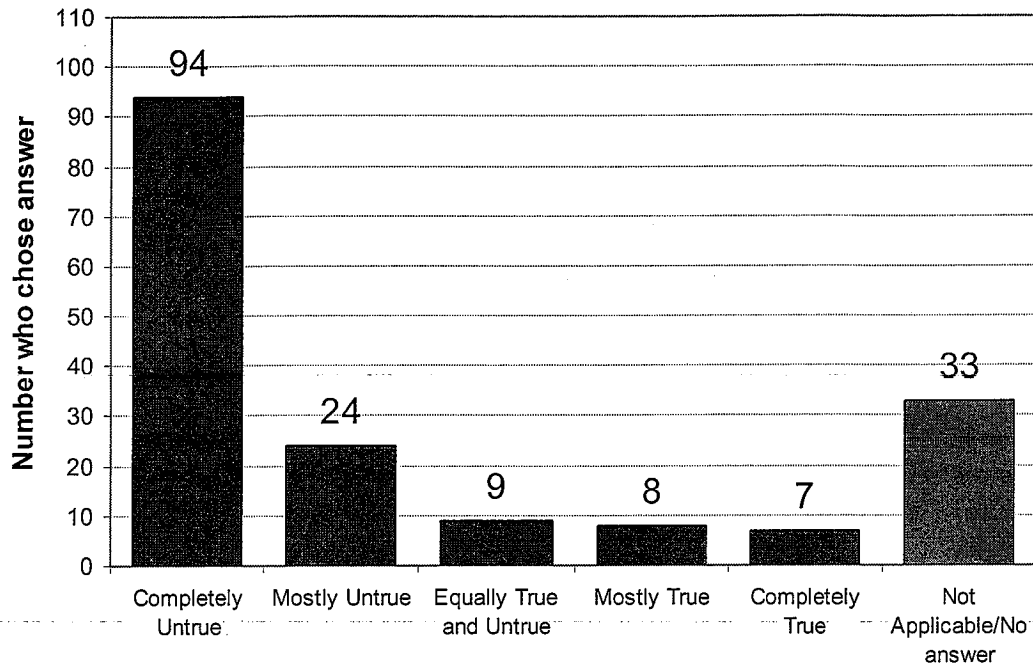


Figure 49. The 48/96 schedule creates a strain on our marital (partner) relationship (n=175)

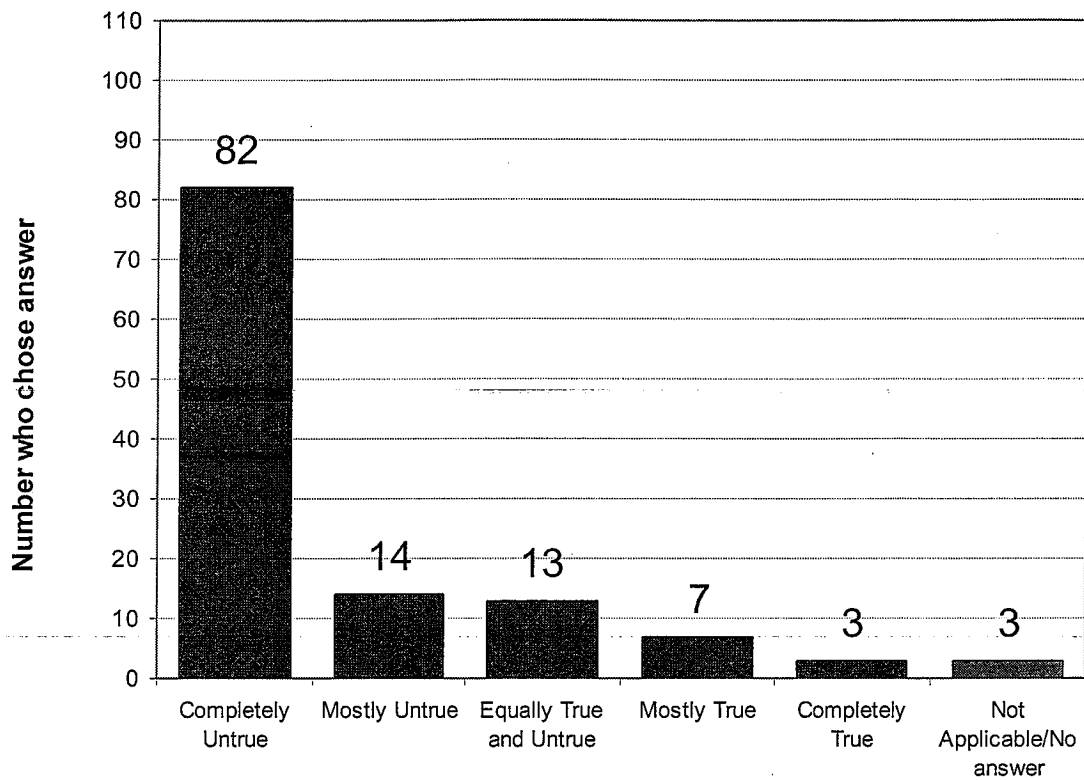


Figure 50. Because of the 48/96 schedule, our (my) family time is less enjoyable (n=175)

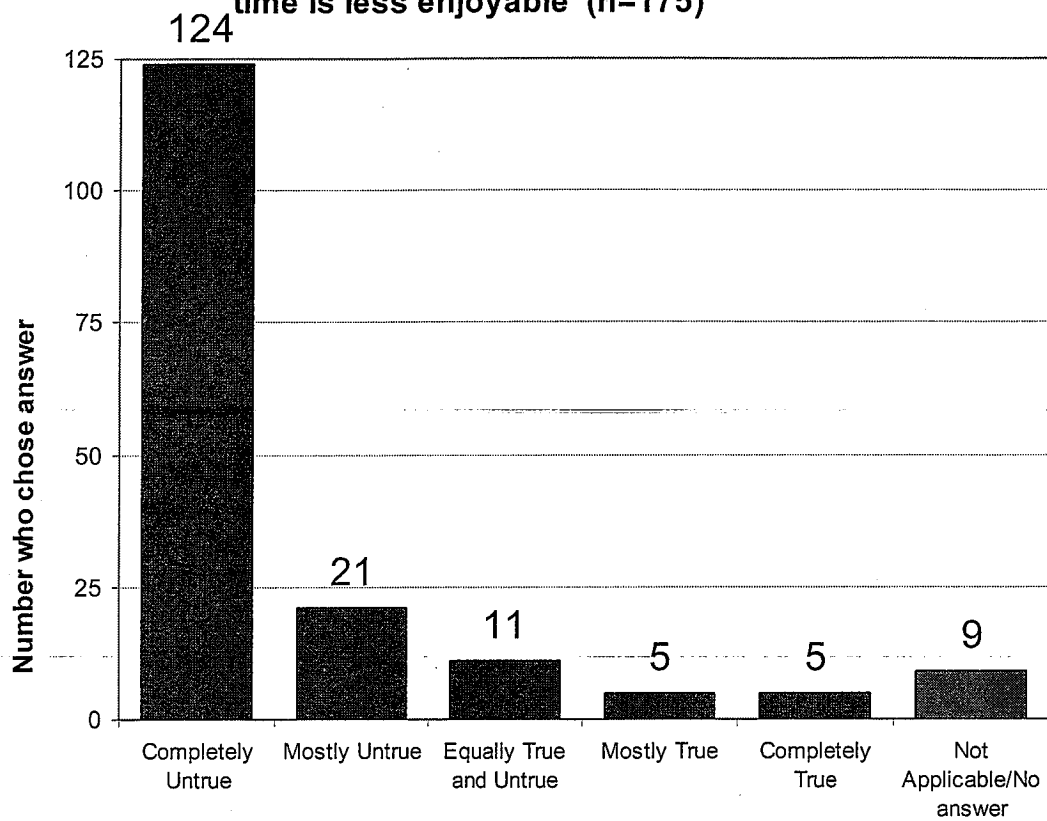
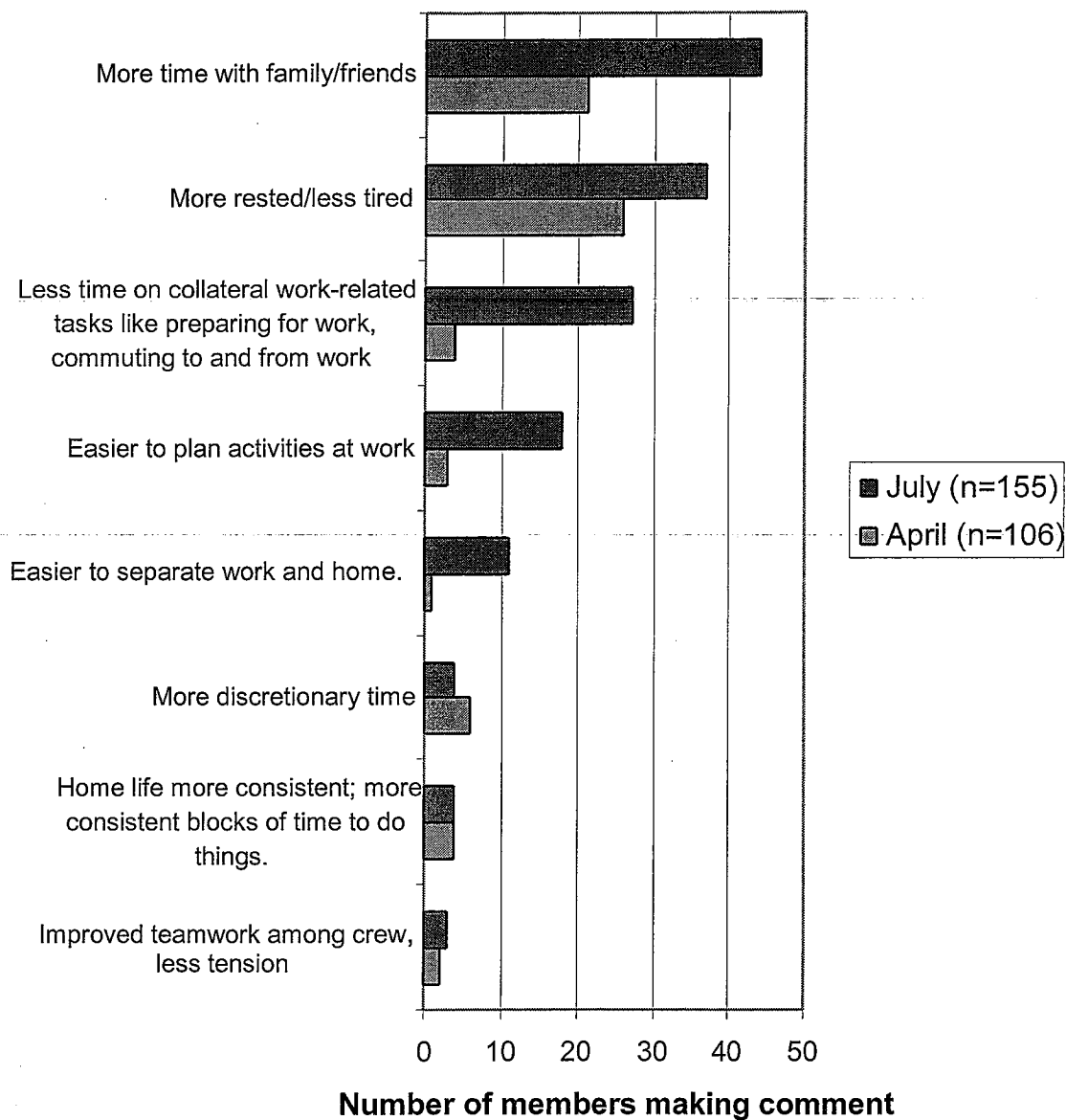
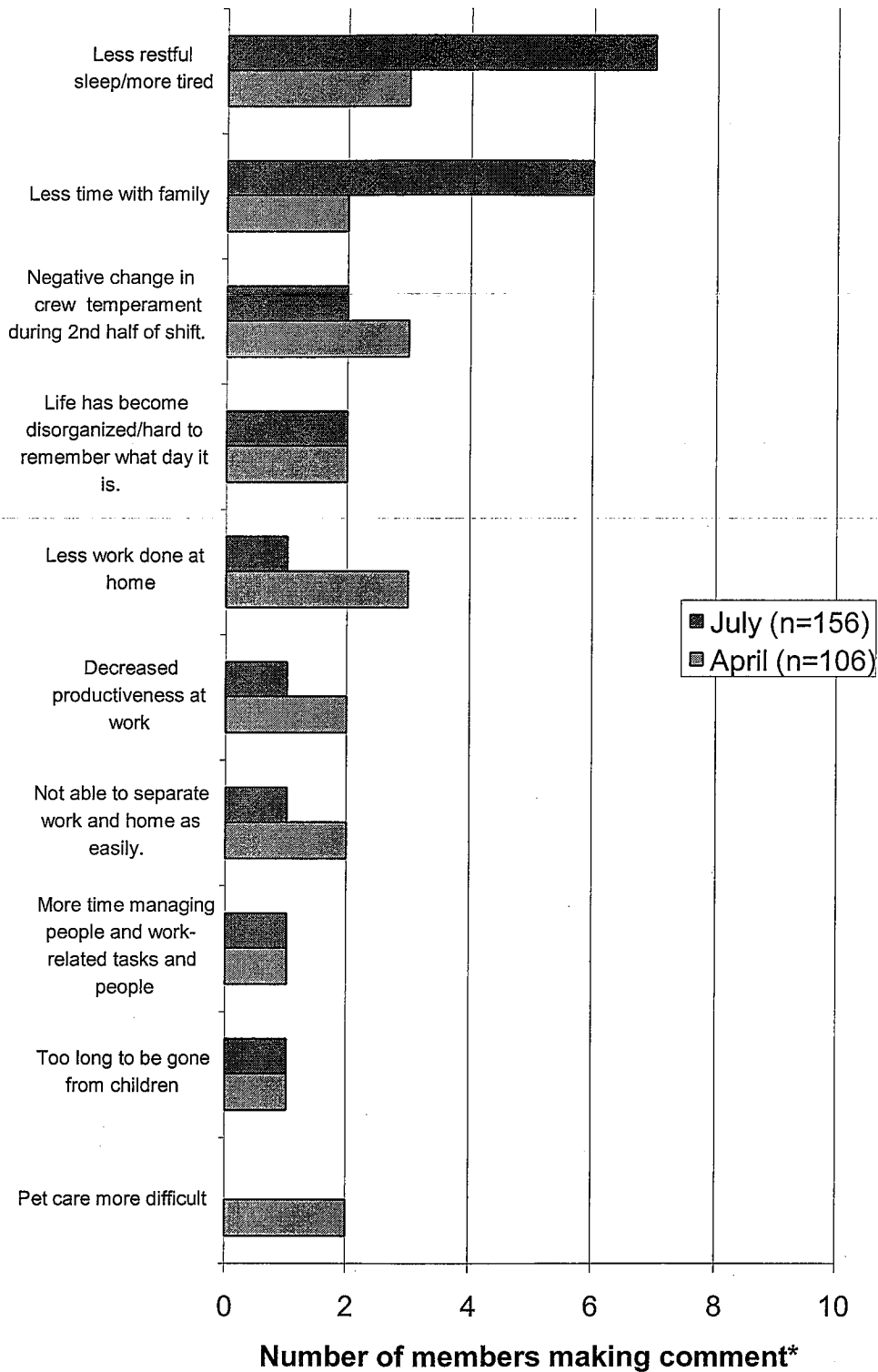


Figure 51 a. MEMBER SURVEYS: Positive comments about 48-96, April and July 2006



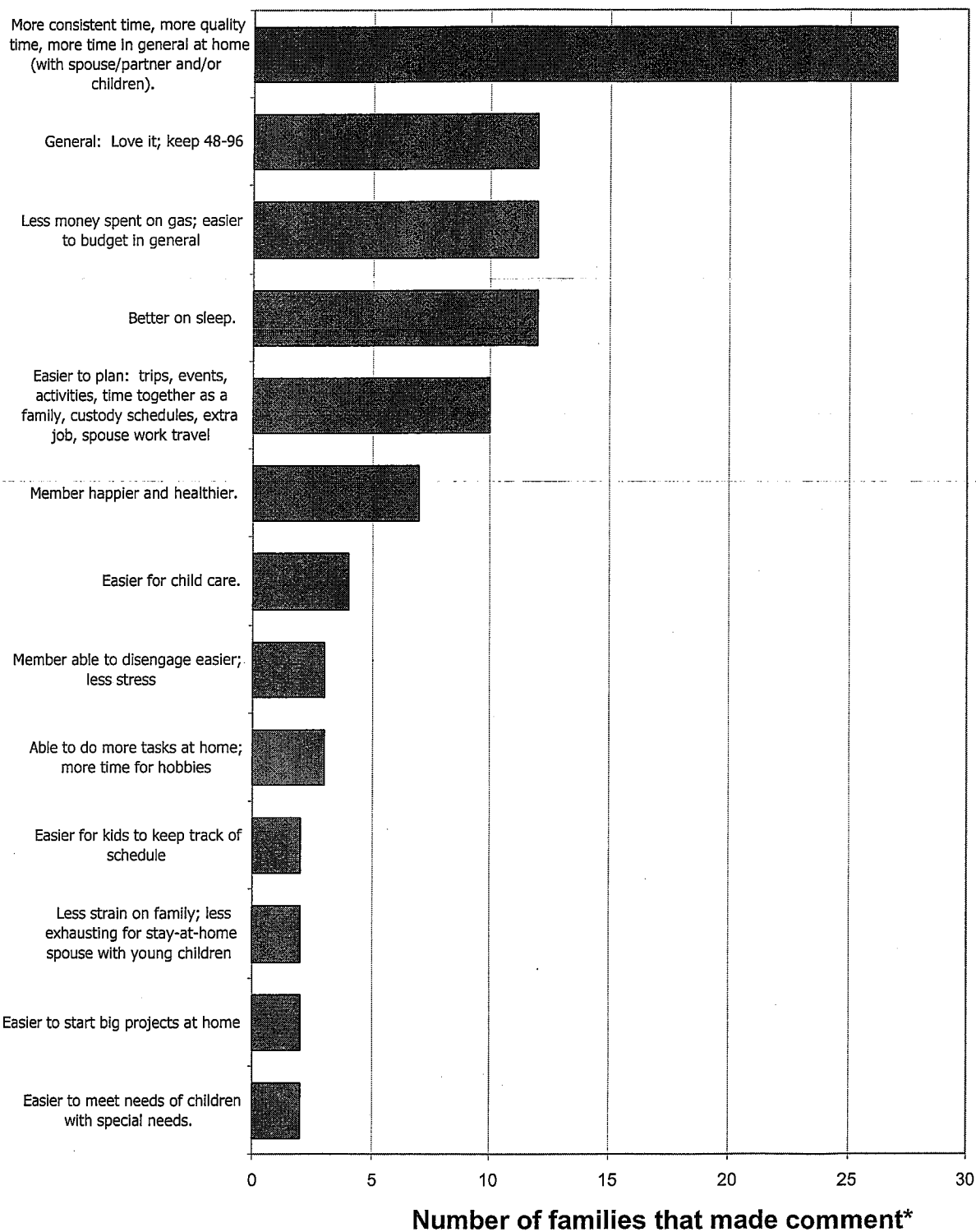
*Members could make more than one comment for each time period. Also, members who answered in April and July could make the same comment twice.

Figure 51 b. MEMBER SURVEYS: Negative comments about 48-96, April and July 2006



*Members could make more than one comment for each time period. Also, members who answered in April and July could make the same comment twice.

Figure 52 a. FAMILY SURVEY COMMENTS: Positive comments about 48-96 shift, August 2006

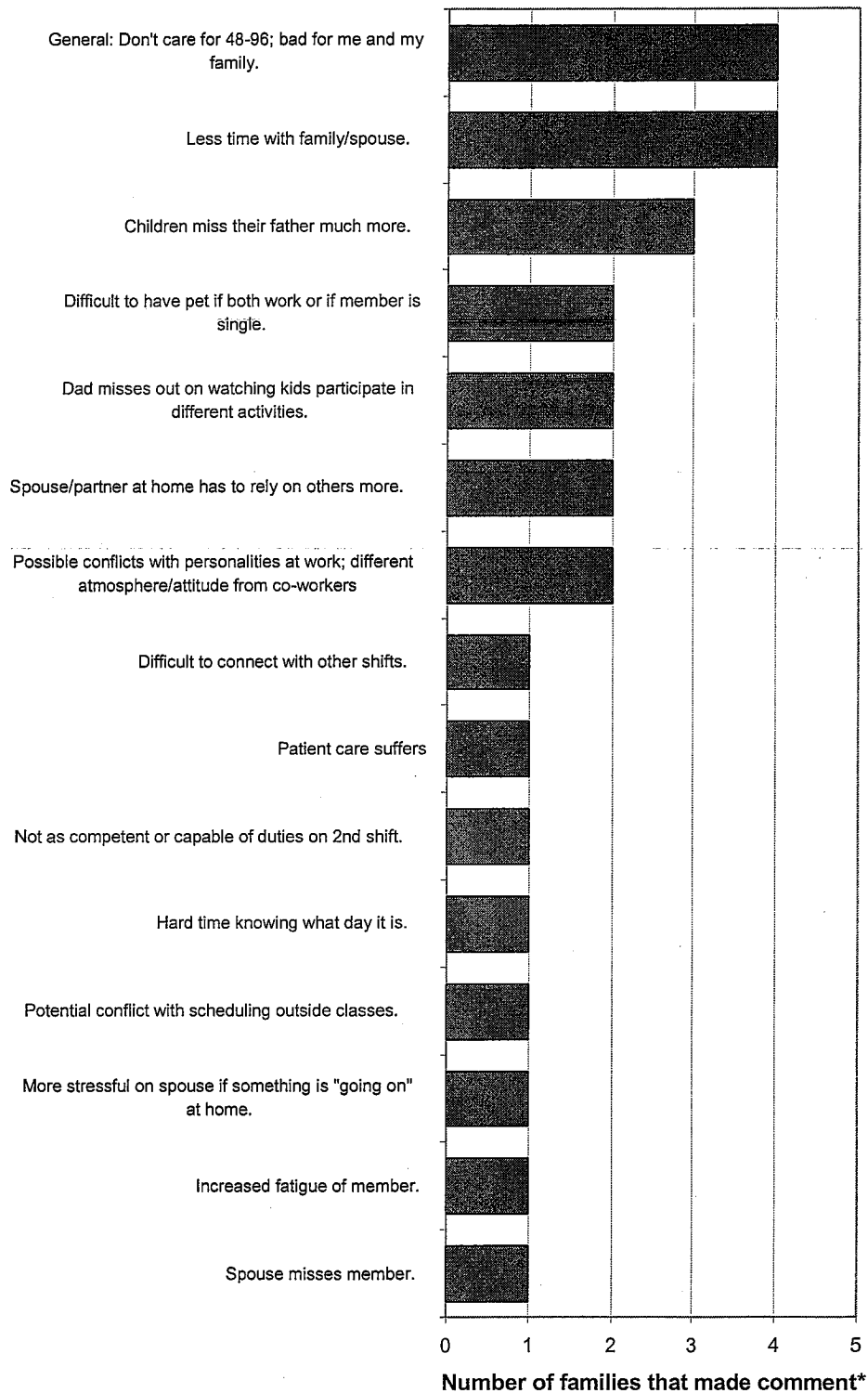


* Families could make more than comment

KEY to symbols: < = less than
 ≤ = less than or equal to

85

Figure 52 b. FAMILY SURVEY COMMENTS: Negative comments about 48-96 shift, August 2006



* Families could make more than comment

APPENDIX A

Statistical Methods and Notes

1. In order for the sleep diary to be in the analysis, the member had to include observations from two or three "ON-SHIFTS" and five or four "OFF-SHIFTS."
2. Statistical significance for paired data was assessed using the Wilcoxon Matched-Pairs Signed-Ranks Test. Accessed 10/1/2006 from http://www.fon.hum.uva.nl/Service/Statistics/Signed_Rank_Test.html.
3. p value is a measure of statistical significance. Significance levels show you how likely a result is due to chance. The p value tells you how likely something is to be not true. Thus, a p value less than ($<$) 0.01 says that there is a less than 1% chance that the results are not true; or in other words, there is 99% chance the results are true. (Adapted from Statistical Significance, accessed 10/18/2006 from <http://www.surveysystem.com/signif.htm>.)
4. Median is the middle number of the observed range. Mean is the average (sum of all observations/total number of observations). for the group of numbers 2,4,7,8, 9,10,15, the median is 8, and the mean is 7.86.
5. Johns KW. 1991. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. Sleep 14(6) 540-5.
6. Statistical significance assessed by Chi-square test, Web Chi Square Calculator, Accessed from http://schnoodles.com/cgi-bin/web_chi.cgi.
7. Standard Shiftwork Index. Accessed November 18, 2005 from <http://www.workingtime.org/images/5/5b/SSIQUES.doc>
8. Barton J, Folkard S, Smith LR, Spelten ER, Totterdell PA. Standard Shiftwork Index Manual. Accessed November 18, 2005 from <http://www.workingtime.org/images/3/31/SSIMAN.doc>
9. Kristensen TS, Borritz M, Villadesen E, Christensen KB. The Copenhagen burnout inventory: A new tool for the assessment of burnout. Work & Stress, July – September 2005; 19 (3): 192-207.
10. Statistical significance assessed with the Kruskal-Wallis test using computing program Minitab, Release 14.

APPENDIX B (Member Questionnaire)

1. How long have you worked in your present shift system? (Can be with other EMS crews as well)
_____ Years _____ Months
2. How long altogether have you been working shifts? (Include all work, not just EMS work).
_____ Years _____ Months
3. On average how many hours do you work each week, excluding overtime? _____ Hours
4. Are you currently a paramedic technician? ☐ No ☐ Yes
5. On average, how long does it take you to travel to and from work? _____ Minutes

For questions 5-7, please answer each question on a scale of 1-5, where 1 indicates the shift system does not interfere at all and 5 indicates that it interferes very much.

6. In general, how much does your shift system interfere with the sorts of things that you would like to do in your leisure time (e.g., sports activities, hobbies, etc.)?
Not at all 1 2 3 4 5 Very much
7. In general, how much does your shift system interfere with the household things you have to do in your time off work (e.g., grocery shopping, looking after children, etc.)?
Not at all 1 2 3 4 5 Very much
8. In general, how much does your shift system interfere with the non-household things you have to do in your time off work (e.g., going to doctor, going to the bank, etc.)?
Not at all 1 2 3 4 5 Very much
9. Do you feel that overall the advantages of your current shift system outweigh the disadvantages?
☐ Definitely not ☐ Probably not ☐ Maybe ☐ Probably yes ☐ Definitely yes
10. How does your spouse/partner feel about you working your current shift?
☐ Extremely unsupportive ☐ Fairly unsupportive ☐ Quite indifferent ☐ Fairly supportive ☐ Extremely supportive ☐ Not applicable

The following questions relate to general job satisfaction and not to your satisfaction with your shift system. Please choose the appropriate answer for each question.

11. Generally speaking, I am very satisfied with this job.
☐ Disagree strongly ☐ Disagree ☐ Disagree slightly ☐ Neutral ☐ Agree slightly ☐ Agree ☐ Agree strongly
12. I frequently think of quitting this job.
☐ Disagree strongly ☐ Disagree ☐ Disagree slightly ☐ Neutral ☐ Agree slightly ☐ Agree ☐ Agree strongly

13. I am generally satisfied with the kind of work I do in this job.

- ☐ Disagree strongly ☐ Disagree ☐ Disagree slightly ☐ Neutral ☐ Agree slightly ☐ Agree ☐ Agree strongly

14. Most people on this job are very satisfied with the job.

- ☐ Disagree strongly ☐ Disagree ☐ Disagree slightly ☐ Neutral ☐ Agree slightly ☐ Agree ☐ Agree strongly

15. People on this job often think of quitting.

- ☐ Disagree strongly ☐ Disagree ☐ Disagree slightly ☐ Neutral ☐ Agree slightly ☐ Agree ☐ Agree strongly

The following questions relate to your work with patients and how satisfying it is for you. Please choose the appropriate answer for each question.

16. Do you find it hard to work with patients?

- ☐ Yes, to a very high degree ☐ Yes, to a high degree ☐ Somewhat ☐ To a low degree ☐ To a very low degree

17. Does it drain your energy to work with patients?

- ☐ Yes, to a very high degree ☐ Yes, to a high degree ☐ Somewhat ☐ To a low degree ☐ To a very low degree

18. Do you find it frustrating to work with patients?

- ☐ Yes, to a very high degree ☐ Yes, to a high degree ☐ Somewhat ☐ To a low degree ☐ To a very low degree

19. Do you feel that you give more than you get back when you work with patients?

- ☐ Yes, to a very high degree ☐ Yes, to a high degree ☐ Somewhat ☐ To a low degree ☐ To a very low degree

20. Are you tired of working with patients?

- ☐ Yes, to a very high degree ☐ Yes, to a high degree ☐ Somewhat ☐ To a low degree ☐ To a very low degree

21. Do you sometimes wonder how long you will be able to continue working with patients?

- ☐ Yes, to a very high degree ☐ Yes, to a high degree ☐ Somewhat ☐ To a low degree ☐ To a very low degree

EPWORTH SLEEPINESS SCALE: The next set of questions asks about your sleep. For questions 21 – 28, use the following scale to indicate how likely you are to doze off or fall asleep in the following situations in contrast to just feeling tired. This refers to your usual way of life in recent times. Even if you have not done some of these things recently, try to work out how they would have affected you.

0 = Would never doze; 1 = slight chance of dozing; 2 = Moderate chance of dozing; 3=High chance of dozing.

SITUATION	CHANCE OF DOZING
22. Sitting and reading	
23. Watching TV	
24. Sitting inactive in a public place (for example a theater or a meeting)	
25. As a passenger in a car for an hour without a break	
26. Lying down to rest in the afternoon when circumstances permit	
27. Sitting and talking to someone	
28. Sitting quietly after a lunch without alcohol	
29. In a car, while stopped for a few minutes in traffic	

30. Do you ever feel tired on YOUR TIME OFF?

☐ Almost never ☐ Rarely ☐ Sometimes ☐ Frequently ☐ Almost always

31. Do you ever feel tired ON SHIFT?

☐ Almost never ☐ Rarely ☐ Sometimes ☐ Frequently ☐ Almost always

32. When you or other crew members feel tired on shift, are you/other crew members more likely to do any of the following activities as compared to when you are not feeling tired? Put a check mark next to each activity that you are more likely to engage in when tired.

Yes, more likely to do when tired.

a. Not take a patient to requested destination.

☐

b. Not chart completely.

☐

c. Others (describe) _____

The following questions pertain your health habits.

33. On average, how many cigarettes do you smoke per week? _____

34. On average, how many alcoholic drinks do you drink per week? _____

(One alcoholic drink is 1 beer, 6 ounces of wine, or 1 shot/1 ounce liquor)

35. On average, how many cups of caffeinated coffee/tea/cola do you drink each day? _____ cups/day

36. Your current age _____ years

37. Gender ☐ Male ☐ Female

APPENDIX C (Family Survey)

INSTRUCTIONS

This survey is meant for all families of West Metro Fire Rescue members. **Families can take many shapes and sizes.**

If you are:

Currently single without dependent children, and are not living with a partner, please answer these questions as they pertain to you.

Married or live with a partner, and do not have children, answer these questions with your spouse or partner. Your "family" is you and your spouse/partner.

Married or live with a partner and have children, answer these questions with your spouse or partner. Your "family" is you and your spouse/partner and your dependent children. *Dependent children* are children that depend on you for financial and/or emotional support, regardless of whether they live with you or whether they are biologically related to you.

If you are single and have children, your "family" is you and your dependent (child)ren. Dependent children are children that depend on you for financial and/or emotional support, regardless of whether they live with you or whether they are biologically related to you.

Activities At Home

Since the SHIFT CHANGE, how has your family found it to accomplish the following activities?

		January through June 2006 -- COMPARED TO -- July through December 2005					
		Much more difficult to accomplish	Somewhat more difficult to accomplish	About the same	Somewhat easier to accomplish	Much easier to accomplish	Not Applicable
EXAMPLE: Taking care of yardwork.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.	Getting daily household tasks done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	West Metro Member: Working at paid job(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	Spouse/Partner - Working at paid job(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	Shopping for necessities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	Handling financial matters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	Maintaining safety/security of your home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	Maintaining automobile.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	Taking care of member's health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	Taking care of spouse/partner's health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	Taking care of elder's health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	Taking care of pets.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12.	"Having a social life." Visiting with friends, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13.	Doing volunteer work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14.	Doing special projects around the home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15.	Participating in leisure time activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16.	Taking personal time for yourselves (getting a hair cut etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17.	Spending time together as a family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18.	Taking care of elder at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The next 8 questions pertain to families with children.							
19.	Arranging for child care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20.	Taking care of children at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21.	Taking care of child(ren)'s health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22.	Ensuring children do schoolwork.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23.	Supervising children's behavior and activities at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24.	Having children take part in after-school activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25.	Participating in activities at your child (ren)'s school (school events, PTA, parent-teacher conferences).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26.	Participating in child(ren)'s extra-curricular activities like Boy Scouts or Girl Scouts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. With the onset of the 48/96 schedule, did you have to change who provides care for your child/children?

- ☐ YES
☐ NO (SKIP to Question #29)
☐ Not Applicable (SKIP to Question #29)

28. Are your current child care arrangements as satisfactory to you as the child care arrangements you had before January 2006?

- ☐ YES
☐ NO. Please briefly explain why they are not: _____

29. With the onset of the 48/96 schedule, did you have to change who provides care for your parent or elder adult?

- ☐ YES
☐ NO (SKIP to Question #31)
☐ Not Applicable (SKIP to Question #31)

30. Are your current arrangements as satisfactory to you as the arrangements you had before January 2006?

- ☐ YES
☐ NO Please briefly explain why they are not: _____

31. With the onset of the 48/96 schedule, did you have to amend your visitation rights?

- ☐ YES
☐ NO (SKIP to Question #33)
☐ Not applicable (SKIP to Question #33)

32. Are your current arrangements as satisfactory to you as the arrangements you had before January 2006?

- ☐ YES
☐ NO Please briefly explain why they are not: _____

Combining Work and Family

To what extent, if at all, is each of the following items true for your family?

	Completely Untrue	Mostly Untrue	Equally True and Untrue	Mostly True	Completely True	Not Applicable
33. The 48/96 schedule creates a strain for our (my) child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Because of the 48/96 schedule, our (my) family time is less enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. The 48/96 schedule leaves us (me) with too little time to be the kind of parent we (I) want to be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. The 48/96 schedule leaves us (me) with too little energy to be the kind of parent we (I) want to be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. The 48/96 schedule creates a strain on our marital (partner) relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Information About Your Household

1. How long is the West Metro member's round trip commute to work?	Minutes
2. Are you (the West Metro member) a single parent with sole custody of a child (ren)?	<input type="radio"/> Yes <input type="radio"/> No
3. Total number of adults living in household (including member).	Adults
4. Would your family be willing to participate in a focus group to discuss these important issues in a more in-depth way? (Separate focus groups will be held for members and for spouses/partners).	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Maybe

About Your Children

☐ I/WE DO NOT HAVE CHILDREN.

YOUR DEPENDENT CHILDREN: AGE, AND SCHOOL GRADE EACH CHILD WILL BE IN, AS OF SEPTEMBER 2006

(IF CHILD WILL BE CARED FOR AT HOME, WRITE "HOME").

	Current Age	School Grade as of September 2006 (if child will be cared for at home, write "HOME")
EXAMPLE:	6	First Grade
First Child		
Second Child		
Third Child		
Fourth Child		
Fifth Child		
Sixth Child		
Seventh Child		
Eighth Child		

Please use space below to make additional comments.

Appendix D

Table 2. Response rates, by method and time of assessment

Method of assessment	TOTAL Response Rate ON-LINE members (n=269)	Number of uniform employees in administrative positions that responded
December 2005		
TOTAL questionnaires returned	160 (59.5%)	12
Consented	122	12
Anonymous*	38	
TOTAL sleep diaries returned	109 (40.5%)	10
Consented	102	
Anonymous*	7	
April 2006		
TOTAL questionnaires returned	106 (40.9%)	3
Consented	78	3
Anonymous*	28	
TOTAL sleep diaries returned	98 (36.4%)	3
Consented	74	3
Anonymous*	24	
July 2006		
TOTAL questionnaires returned	156 (57.9%)	7
Consented	113	7
Anonymous*	43	
TOTAL sleep diaries returned	129 (48.0%)	4
Consented	97	4
Anonymous	32	
Family Survey**	175 (65.1%)	NA
Focus Groups	See attached report	See attached report

* The response rate to the first survey and sleep diary was less than optimal, so the protocol was changed to allow members to respond anonymously.

** The Family Survey was not included in the research and the questionnaire was administered anonymously.



JVA CONSULTING, LLC
linking experience and vision

West Metro Fire Rescue

Focus Group Report

Prepared By:

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September 2006

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INTRODUCTION

In July 2006, St. Anthony's Hospitals contracted with JVA Consulting, LLC to conduct focus groups with West Metro Fire Department staff and family members. The main purpose of the evaluation was to gather qualitative data on how a recent 48/96 shift change has affected the quality of family life for members and their families. This study served as a companion piece to a larger evaluation conducted by St. Anthony's Hospitals.

METHODOLOGY

JVA Consulting, LLC (JVA) worked with St. Anthony's hospitals to develop focus group protocols and structured discussion questions and to schedule participants (see Appendix A). JVA facilitators conducted a total of six focus groups, three with firefighters and three with spouses. JVA research associates facilitated the focus groups and transcribed audio-recordings of the discussions. A JVA senior research associate analyzed the data and prepared the final report.

Thirteen firefighters participated across three focus groups: four firefighters in the first group, three in the second, and six in the third. Eleven spouses/partners participated across three focus groups: two in the first group, three in the second and six in the third. Focus groups were conducted at West Metro Fire on August 29th, 30th, and September 1st at 6:00 in the evening. The West Metro Community Outreach Director scheduled the focus groups and invited all West Metro firefighters, staff, and spouses to attend. A final list of participants who had agreed to attend was sent to JVA in early August. These participants were mailed letters confirming the date, time, and location of the focus groups, as well as the focus group questions so that they would know what to expect. Firefighter/staff and partner focus groups were conducted simultaneously in different rooms to allow families who wanted to participate to travel together. Childcare and dinner were provided.

RESULTS

1. Firefighter Focus Groups

Length of time with West Metro Fire Department

The length of time that firefighters have been with West Metro Fire Department ranged from 6 to 20 years with an average of 11.5 years. Over half (7 out of 13) have been with the department for 10 or more years.

Shift Change Process

The majority of firefighters agreed that the transition to the new shift could not have been planned better. They were happy with how it was introduced and implemented. It was a matter of adjusting to a new routine, such as the new training schedule, which could not have been planned for. One firefighter stated,

"It was a lot easier than I thought. ... I expected the first day to be really long and the second day to be even longer, but it didn't turn out that way at all. It was an easy transition."

The general consensus from firefighters across all three focus groups was that the process of changing to the new 48/96 shift went smoothly and without problems. Firefighters had some discussion on how to handle minor issues, such as housekeeping/chores and morning wake-up times, during the new shift. Firefighters also adjusted the training schedule so that trainings fit into two days instead of three to accommodate the new shift. One person working in the office did not have any problem with the shift change. Several said that they liked the new schedule compared with the previous schedule because it gave them more time at home or with family. One firefighter who was a volunteer previously reported no schedule preference. In commenting about a two-platoon shift and Kelly days at a previous department, another firefighter reported,

"They went to the old schedule soon after I left, but I certainly hope we don't go to a schedule like that ever again."

Strengths of the 48/96 schedule compared with the previous schedule

Firefighters felt that there were numerous strengths to the 48/96 schedule, including financial, physical/mental health, and time benefits, as well as increased productivity and home/work balance.

- Financially, firefighters in two of the three focus groups have found that they **spend a lot less on gas** since they have to drive to the firehouse fewer times a week. One person views the saving of \$300 a month on gas as the equivalent of a salary increase.
- Most firefighters claim that they are **less fatigued** with the new schedule, which allows them to get more rest during time off. With the previous schedule, many felt that the in-between days were useless because they were so tired, or they couldn't sleep because they were so busy getting other things done. "It wasn't easy to switch gears," one firefighter said. With the new schedule, they claim to have less burnout and feel they can cope better so that tasks do not accumulate or overwhelm them as much.

Much of the feedback is related to the **increased time** firefighters now have in their new schedules:

- Many like that they can now have more time for mini-vacations, especially if they go out of town. On the new schedules, staff have fewer days (10 vs. 13 days) per vacation, but they have a greater number of vacations per year (five times per year compared with three times).
- They are able to schedule more personal time for projects and socializing with friends.
- With the new shift, firefighters have more full weekends off. Many say they have more time with their children (especially with regard to custody time), to attend their extracurricular activities and school events. Some say that it feels like there are more days off, even though there are not.
- Firefighters enjoy more rest time when they sleep at the firehouse on the second morning rather than waking up earlier at home to drive in.
- Another strength of the new shift is the time saved by not driving to the firehouse as frequently. One person estimated that it is 10 hours less driving time per month for firefighters who commute from Castle Rock.
- According to several firefighters, the new shift allows for increased productivity at work, because when they are at work for two days they are focused on work, and when they get off the shift they can go home and be focused on home life for four days. This equates to less stress and more balance between work and home. As a result, firefighters feel better physically and mentally and are able to exercise more frequently (on the second morning of the shift since they are already at the station).
- They also find it easier to deal with family on the new shift because they are happier at work and at home. They report that their partners/spouses like the new shift because firefighters have more home time, and when they are home, they are easier to get along with.
- Another plus is decreased stress and anxiety related to fewer shift changes in the mornings. Shift changes are stressful when a call comes in at the beginning of a shift change and the incoming crew does not have time to do inspections, etc. Since firefighters stay on duty for two consecutive mornings on the new shift, there are half as many shift changes to deal with. The result is greater efficiency and people receiving better service.
- Several firefighters in one group agreed that they have more time to handle emergencies since they do not have to work the next day and can deal with contractors (i.e., pipes burst), or they can carry a project over from day to day.

Challenges of the 48/96 schedule compared with the previous schedule

Participants across all three groups felt that the 48/96 schedule does not pose many new challenges within their family/social life, and instead, it may relieve some of the challenges from the previous schedule. The main challenge reported was the initial adjustment to the new schedule for their children. For instance, one dad's young child misses him by the second night of the shift, but they cope by communicating by telephone. Another reported challenge was the stress for spouses/partners to manage the house for two days because they are more fatigued with home issues (i.e., taking care of the kids, appliance breakdowns, etc.), which they have to handle on their own. Firefighters see these as minor problems that are manageable. Special circumstances such as illness of a spouse/partner or children can also be difficult to deal with under the new schedule. Some of the single firefighters reported difficulty in caring for pets (i.e., feeding) when they are gone for 48 hours. Inevitably, they need someone else to help care for them or they have to give up their pets.

Another challenge is not getting enough rest for the second day of the shift. Firefighters have to get up early the next morning of the shift instead of sleeping in at home on the off day (previous schedule). Firefighters who work on ambulances reported that if they have a rough first day they will be tired for the second day shift.

Lastly, one person brought up the point that the 48/96 schedule makes it difficult to transition to another station. They reported feeling out of place and awkward. Similarly, with the 48/96, it is hard for people to move into busier houses (stations) with training and chores because it disrupts their routine.

Suggestions offered by participants for addressing challenges

Firefighter participants offered several suggests for how to address challenges posed by the shift change. For those who are busy on the first day of their shift, such as the ambulance workers, the solution is usually to have their schedules cleared until lunch (if there is not a training) so they can get some rest. Firefighters in all three groups feel it would also be helpful to have a supportive employer who lets staff take some hours to go home if they have a sick child or spouse without having to take the entire day (24 hour shift) off. Most are in favor of giving officers leeway to use their judgment to tailor their policies to the resources and needs of the individual crew. This can also be applied to caring for pets. They agree that additional support from the department, such as daycare for children, would help in critical situations. Others added that family support could be provided by team members and others they work with who are off duty and can go over to help spouses. Others seconded this idea by saying, *"It would be nice to have,"* and, *"It would make a lot more wives a little bit more at ease."*

Other intended or unintended changes

West Metro Firefighters in two of the three groups reiterated that as a result of the new shift, they are able to spend more time with their children, spouses, friends and family. As one firefighter shared, he now gets to put his child to bed more often because of the four days off. It is an unintended benefit for young children, as one dad pointed out, because four days home have more of an impact for young children than having a parent gone for two consecutive days. One dad speaking about his young daughter stated, "...It's like I am never gone to her." Another firefighter added that he would like to see families visit the firehouse more, now that firefighters have 48 hours away from home. Others in the group agreed that having families visit the firehouse would be a positive change and that it is already happening at other stations. Additional comments regarding time included that firefighters enjoy time in general more now and they are able to get more done on the new schedule. In fact, one firefighter shared that he/she has had less sick time on the 48/96 schedule and has not called in sick yet since its inception. Participants in one group all agreed that the pros and cons of the 48/96 schedule really depended on the personal choices they make in their lives (i.e., where to live, whether to have a pet, etc.).

Although questions in the focus group centered on quality of home life outside of work, firefighters in two groups spent some time discussing concerns about the enforcement of safety guidelines related to rest and hydration during the 48/96 shift. They reported a lack of consistent policy regarding when a firefighter is expected to work during the day shift following a busy night that allows for little sleep. This, according to one firefighter, is easily handled if the officers call in a shift change. Along these same lines, another firefighter would like to see some flexibility built into the schedule with regard to training, especially for busy stations. He/she feels that training should not be as strictly enforced if they have not had a chance to rest from a busy night. Also, if they have been training on a live fire the first day of the shift and then get a call for an actual fire, they don't have a chance to rest, hydrate, recover, and eat. In other words, federal safety standards are not accommodated with this new schedule since some departments still expect the same activity level on a 48/96 shift. The department has not addressed this issue of a lack of flexibility with the new schedule and there has not been discussion around what small solutions have worked at other stations that can be implemented at West Metro. One example given of a "clever way to manage time" was of a station with a two-day shift schedule that posts all of its trainings, work to be done, and events as a means to splitting up the shifts. In the words of one firefighter, "It is important for the union or department to embrace ideas of what other stations are doing."

Lastly, the discussion in one group centered on the issue of time efficiency. Firefighters feel they have to be more efficient with their time to get everything done (fire inspections, for example) in two days on the new shift instead of three on the old shift. One person would be interested in seeing the statistics tracked for building inspections on this new schedule. Conversely, if a station is not busy with calls and there is a lot of free time, and the staff does not necessarily get along (eat together, etc.), "it would be

crazy," as one person speculated. To which another responded that this was a departmental issue and the officer in charge would need to keep his staff busy in training as a potential solution.

II. Partner/Spouse Focus Groups

Shift Change Process

Spouses/partners of West Metro Firefighters across all three groups agreed that the process of changing to the new shift was easy and that they were given plenty of notice (at least four months). As one spouse/partner shared, *"...After a couple of shifts you were used to it."* Several spouses in one group noted that the shift change was an ongoing process in which they were involved, via letters sent home and discussion groups. They also said that vacation times were selected before the transition and that they are based on seniority. Partners/spouses in another group said that the new shift has made it easier to plan family activities and that their partners like not having to drive to work as much. One spouse/partner who also works outside the home shared that when his/her spouse was on the old shift they never had mornings together. None of the participants who were interviewed felt that the shift change process could have gone better.

Strengths of the 48/96 schedule compared with the previous schedule

Spouses/partners shared several strengths of the 48/96 schedule compared with the previous schedule, including the benefits of having more time (spousal, family, vacation and weekend time), less daycare needs, more continuity at home, less fatigue for their firefighter spouses, and more personal time for themselves.

- Having more spousal time together was noted across all three groups as a significant strength of the 48/96 schedule. In fact, several spouses in one group felt that the new schedule was less stressful on their marriages and strengthened their relationships. One spouse stated improved communication and less anxiety:

"We seem to talk more and he seems less distracted. We have a better relationship because the time is less distracted."

Another partner/spouse also felt that the new schedule was less stressful on their relationship.

"We'll make it work one way or another, but this is going to make it better. Maybe not better but easier."

One spouse who also works outside the home added that her husband's schedule is much easier to follow; they have more time together, in particular mornings. Another partner stated that now she does not have to go to as many events alone.

- Another strength of the new shift discussed in two groups is the need for less daycare. One partner/spouse has found it easier to obtain daycare for two days a week rather than the three days in the old schedule. Another does less driving with the new shift because she does not have to drive her children to babysitters as often.
- Benefits of the new shift extend to the whole family in terms of more time and more quality interaction between family members. Spouses/partners reported that now both parents can attend children's activities, and spend quality time together as a family instead of watching TV and dosing off from fatigue. This strength was brought up in all three groups and applies to families with children of all ages (infants to teens). Those in separate households have more custody time with their children who may live farther away. Many agree that the new shift is easier on the whole family. Spouses/partners reported that firefighters are less irritable at home because they are not as tired. As someone reported,

"I see how much better he is, how much he gets done around the house, and how much more energy he has than me."
- The new schedule also has the advantage of more time off, including weekends and additional vacation days. In the previous schedule, firefighters had weekends off once every three months, compared to once every six weeks on the 48/96 schedule. If they trade out vacation days, families receive 50 days with the new schedule, compared with 39 days previously. The new schedule also decreases the need to have trade time (which is difficult to arrange, especially for some positions such as captain) since Firefighters have more days off.
- Spouses/partners in all three groups find that the new schedule is less emotionally stressful because they no longer have to mentally "gear up" for that five-day stretch of their spouses working on and off. They didn't have much time in the evenings on the days off in between because their spouses/partners had to go to bed at nine to get enough sleep for the next work day.
- The 48/96 schedule also allows for greater continuity at home since firefighters work for two days and then are home for four straight days. As one spouse/partner put it, *"They're gone for their period of time, and when they're home, they're home."* On the old schedule, *"He's got to be a dad as soon as he walks in the door."* On the new schedule, according to spouses/partners in all three groups, firefighters can integrate back into the home with greater ease. Many commented on how much easier it is for their firefighter partners to start and finish home projects.
- As mentioned previously, spouses/partners across all groups notice their firefighter partners are less fatigued, more relaxed and happier on this new shift. For example, one spouse said that, *"...Before, he was fatigued by the sixth day; it would take a day to make it up, and then on his fourth day off he was focused on getting back into the schedule again."* With the previous schedule, their firefighter partners could not do much on the in-between days, which left only two days a week to do anything.
- Lastly, spouses/partners in one group have found that they have more personal time for themselves with the 48/96 schedule, because they are no longer feeling that they

need to be home for family time as they previously did on the in-between off days. Several said that they have more time to exercise or indulge in a little time for themselves.

Challenges of the 48/96 schedule compared with the previous schedule

Spouses/partners did not come up with sizeable challenges, but instead discussed some minor issues resulting from the 48/96 schedule. As discussed in two groups, it is difficult for spouses/partners to have their firefighter partners out of the house for two days when they and their children are sick and need some extra help. Or as one spouse put it, *"Everything happens the day he's gone."* It is also tough when the spouse/partner works all week and then the firefighters work on the weekend; however this only occurs once every six weeks. Some spouses/partners in one group expressed concern that their firefighter partners might be switched to a busier firehouse and the fatigue they would undergo on the 48/96 shift.

In addition, firefighters cannot do too many trades for vacation time because they cannot work three days in a row. Another spouse/partner who has older children ready to "leave the nest" does not look forward to being alone for longer periods of time on the new schedule. Yet another stated that the new schedule does not work well with her school schedule. One spouse/partner is inconvenienced more since they have had to move farther away from the grandmother who cares for their child.

Suggestions of spouses/partners for addressing challenges

Spouses/partners offered several suggests for how to address challenges posed by the shift change. One suggestion made was to have an internal system to handle trades, like a bank of people who want to work or need a trade, instead of having to call someone. Another spouse/partner feels the new schedule would be more convenient if his/her spouse worked closer to home.

Changes in your partner/spouse since the onset of the 48/96 schedule

Quite a few spouses/partners in all three groups said that their firefighter partners are not as tired since the onset of the new schedule. They are able to sleep in longer at the firehouse on the second day of the shift as opposed to waking up early and driving in from home on the old shift. One spouse/partner mentioned that his/her spouse is more comfortable at the firehouse and is more settled in since he/she is there for two consecutive days. Another said, *"He loves not driving as much."* Spouse/partners report that firefighters also receive fewer shift change calls and TeleSTAT calls since the onset of the new 48/96 schedule.

Other intended or unintended changes

The general consensus across the three groups was that they all like the shift change and have not heard of many others who do not like it. One mother of five appreciates the schedule so much more because her firefighters partner can be home and help out more with the kids, like volunteering at their school. There is more consistency for the children. Another mother finds that she and the children do not have to be quiet around the house and sleep in the basement when the children are sick so that her firefighter spouse can get sleep. As one spouse/partner put it, *"Going back to the old schedule would be scary."*

CONCLUSIONS

In summary, 13 firefighters and 11 spouses/partners participated in six focus groups, with a majority of firefighters having worked for West Metro for over five years. Focus group participants included firefighters in several different roles within the department, many of whom are firefighters. The transition into the 48/96 schedule was seen by participants in both groups as rather effortless. They felt they were given enough time to prepare for the change and it could not have been planned any better.

Both firefighters and their partners/spouses are in agreement as to the main strengths of this new schedule. These include increased time for family, spouses, vacations/weekends, rest, and personal time/projects, decreased fatigue, a greater work/home balance and continuity at home, and much less stress and anxiety.

Among the challenges of the new shift, firefighters and their spouses report only minor ones, such as a concern for increased fatigue on the second day of the shift. Families also struggle with two consecutive days without their firefighters partner when they and their children are sick or something goes wrong around the house. The solutions given to these problems were to have shift changes when there is not enough time to rest, and to have more departmental support for families (for childcare, time flexibility, etc.).

In conclusion, both firefighters and their spouses/partners approve of the change to the 48/96 schedule and would not like to return to the old schedule.

APPENDIX A: FOCUS GROUP PROTOCOLS

West Metro Fire Rescue Firefighter Focus Group

Introduction:

Thank you for joining us to share your thoughts about the 48/96 West Metro shift change. We are independent evaluation consultants hired by St. Anthony Central Hospital to conduct focus groups with firefighters and their families to gather more in-depth information on how the shift change has affected your family life. Many of you also took the time to complete the survey, and we thank you for your responses. These focus groups are intended to build on those responses in a more detailed way. **All of your answers will be kept completely confidential.** There will be an evaluation report submitted to St. Anthony Central Hospital that will summarize the conversation we have this evening. **However, no names or other identifying information will be associated with responses, and all responses will be reported in such a way as to mask the identity of the responder.** St. Anthony Central Hospital will submit our evaluation report along with the survey results to West Metro Fire Rescue administration and the Board of Directors.

Ground Rules:

We ask that you adhere to the following ground rules during this focus group:

- Be respectful of the opinions/responses of others
- Whatever is said in the room remains in the room; to allow people to be as open and forthright as possible
- Turn off the ringer on your cell phone
- Allow for everyone to have a chance to respond

Discussion Questions:

1. How long have you been with the West Metro Fire Department? What is your role with the Department? (*ask this only if there are different levels all present (chief, captain, lieutenant, etc.)
2. How smoothly did the actual process of the shift change occur? How could this have been done better?
3. In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, What are the strengths of the 48/96 schedule compared with the previous schedule?
4. In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, What are the challenges of the 48/96 schedule compared with the previous schedule?
5. Do you have any suggestions for how these challenges might be addressed?
6. Are there any other changes, intended or unintended, that have occurred as a result of the shift change that we have not discussed?

West Metro Fire Rescue Focus Group: Partner/Spouse

Introduction:

Thank you for joining us to share your thoughts about the 48/96 West Metro shift change. We are independent evaluation consultants hired by St. Anthony Central Hospital to conduct focus groups with firefighters and their families to gather more in-depth information on how the shift change has affected your family life. Many of you also took the time to complete the survey, and we thank you for your responses. These focus groups are intended to build on those responses in a more detailed way. All of your answers will be kept completely confidential. There will be an evaluation report submitted to St. Anthony Central Hospital that will summarize the conversation we have this evening. **However, no names or other identifying information will be associated with responses, and all responses will be reported in such a way as to mask the identity of the responder.** St. Anthony Central Hospital will submit our evaluation report, along with the survey results, to West Metro Fire Rescue administration and the Board of Directors.

Ground Rules:

We ask that you adhere to the following ground rules during this focus group:

- Be respectful of the opinions/responses of others
- Whatever is said in the room remains in the room, to allow people to be as open and forthright as possible
- Turn off the ringer on your cell phone
- Allow for everyone to have a chance to respond

Discussion Questions:

1. How long has your spouse/partner been with the West Metro Fire Department?
2. How smoothly did the actual process of the shift change occur? How could this have been done better?
3. In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, what are the strengths of the 48/96 schedule compared with the previous schedule?
4. In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, what are the challenges of the 48/96 schedule compared with the previous schedule?
5. Do you have any suggestions for how to address these challenges?
6. What changes have you seen in your partner/spouse since the new schedule?
7. Are there any other changes, intended or unintended, that have occurred as a result of the shift change that we have not discussed?

**CHIEF'S BRIEFING
TO
THE BOARD OF DIRECTORS**

MEETING DATE: Nov 8, 2006

INFORMATION REGARDING:

<input type="checkbox"/> Meeting With Outside Agency	<input type="checkbox"/> Vacation/School Notification
<input checked="" type="checkbox"/> Planning Item	<input type="checkbox"/> Trend Identification
<input type="checkbox"/> Attachment Included	<input type="checkbox"/> Other

**SUBJECT: Contract Negotiations of the High Plains Fire Manager Information
Management System and Services**

BRIEFING:

West Metro Fire Protection District (WMFPD) has recently completed a request for information (RFI) and request for proposal (RFP) for a replacement Information Management System. WMFPD has received funding to purchase and implement a replacement information management system for EMS/Fire incident records.

It was determined by WMFPD stakeholders that the current records management system falls short on many of the newer requirements that fire and EMS personnel are asked to process. Given the approval to conduct a RFI and RFP, many hours of preparation and vendor presentations were conducted in order for WMFPD stakeholders to make and educated and informed decision on a replacement Information Management System. Initially the scope of the project was to identify a replacement RMS system. Once it was determined that we could not only replace the RMS system, but incorporate many of the functions we do today using disparate software systems; in the information technology arena this is referred to as an ERP (enterprise resource plan). The ERP would eventually incorporate financial, EMS billing, staffing, and human resource functions, along with the primary needs of fire and EMS personnel into a single unified system.

Every effort was made to minimize redundancy and eliminate needless data entry. The incident reporting module is completely integrated with our computer aided dispatch system, as well as their life safety and human resource modules. This integration makes it possible to incorporate extensive information about our commercial occupancies automatically. All fire and EMS reports can be completed in the field. Nearly all of the report, including the narrative, can be completed using the point-and -click user interface. This equipment and services are part of a greater mobile solution to include mobile CAD software, and a mobile data infrastructure. These future expenditures will be presented at a later date, but are inclusive in the overall Bond Funding.

FINANCIAL DETAILS: Amount Budgeted \$295,000

CONCLUSION AND RECOMMENDATIONS: Approve Contract and Statement of Work Negotiations for this project.