

**Navy Personnel Research and Development Center**

San Diego, California 92152-7250

TN-94-7

October 1993

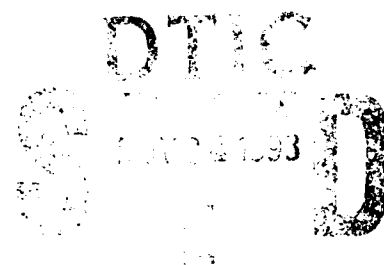


**AD-A273 066**



# **Comparison of Permanent Change of Station Costs for Women and Men Transferred Prematurely From Ships**

**Carol E. Newell  
Patricia J. Thomas**



**93-28694**



110px

**93 11 23 07 7**

# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE October 1993		3. REPORT TYPE AND DATE COVERED Final—Fiscal Year 1992	
4. TITLE AND SUBTITLE Comparison of Permanent Change of Station Costs for Women and Men Transferred Prematurely From Ships				5. FUNDING NUMBERS Program Element: Reimbursable Work Unit: 92POPS593	
6. AUTHOR(S) Carol E. Newell, Patricia J. Thomas					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Navy Personnel Research and Development Center San Diego, California 92152-7250				8. PERFORMING ORGANIZATION REPORT NUMBER NPRDC-TN-94-7	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Chief of Naval Personnel Navy Department Washington, DC 20370-2300				10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES Functional Area: Personnel Systems Product Line: Women and Multicultural Research Effort: Integration of Women					
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.				12b. DISTRIBUTION CODE A	
13. ABSTRACT (Maximum 200 words) The objective of this report was to determine whether transferring pregnant women from ships costs the Navy more permanent change of station (PCS) funds than transferring men and nonpregnant women.  Information was extracted from the Enlisted Master Record concerning gender, reason for transfer, time remaining until prospective rotation date (PRD), receiving command, and the cost of PCS moves for all premature transfers in FY92 from gender-integrated afloat units. The direct cost of transfer prior to PRD was compared for men and women and an estimate of PCS costs, if ships were not gender-integrated, was also calculated.  Findings from this study were:  1. Proportionately more women than men prematurely transferred off ships. 2. Pregnant women had the most sea time duty remaining when they rotated. 3. Men had the highest average PCS costs. 4. The estimated PCS costs for gender-integrated ships if they were not integrated was more than the estimated costs with women in the crew.					
14. SUBJECT TERMS Cost, premature transfer, ships, gender difference				15. NUMBER OF PAGES 17	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNLIMITED		

## **Foreword**

Pregnancy among women assigned to ships creates personnel turbulence because the women must be moved ashore to protect their health and that of their unborn children. Pregnancy also impinges upon the cost of personnel moves because such events result in expenditures beyond what is budgeted for normal rotations. The Chief of Naval Personnel tasked the Navy Personnel Research and Development Center to determine the actual cost of moving pregnant women from ships and to compare it to the cost of moving other personnel prematurely (Reimbursable. Work Unit 92POPS593).

The authors wish to thank Lieutenant Susan Deneale for her explanation of the Permanent Change of Station Move/Cost Prediction Model and help with our questions.

**RICHARD C. SORENSON**  
Technical Director (Acting)

**Preceding Pages Blank In DOCUMENT**

## **Summary**

### **Problem**

Personnel who are transferred from their commands before their prospective rotation date (PRD) cost the Navy additional permanent change of station (PCS) funds. More complaints regarding cost of transfers have been directed towards pregnant females aboard ships than men or nonpregnant women.

### **Purpose**

The purpose of this report was to determine whether transferring pregnant women from ships costs the Navy more PCS funds than transferring men and nonpregnant women.

### **Approach**

All premature transfers in FY92 from afloat units where women are assigned were identified. Information was extracted from the Enlisted Master Record concerning gender, reason for transfer, time remaining until PRD, receiving command, and the cost of PCS moves. The direct cost of transfer prior to PRD was compared for men and women. An estimate of PCS costs, if ships were not gender-integrated, was also calculated.

### **Findings**

1. Proportionately more women than men prematurely transferred off ships. The primary reason was pregnancy.
2. Pregnant women had the most sea time duty remaining when they rotated.
3. All three groups were primarily transferred to shore commands.
4. Men and nonpregnant women differed somewhat in their reasons for transfer. More women than men transferred for training, and more men than women were directed transfers, which occur for administrative reasons.
5. Men had the highest average PCS costs.
6. The estimated PCS costs for gender-integrated ships if they were not integrated was more than the estimated costs with women in the crew.

### **Conclusion**

PCS costs would not be reduced if ships were crewed solely by men, even though fewer unplanned losses would occur.

## Contents

<b>Introduction .....</b>	<b>1</b>
Background and Problem.....	1
Permanent Change of Station Budget.....	1
Purpose.....	1
<b>Method.....</b>	<b>2</b>
Sample Section .....	2
Data Analysis .....	3
<b>Results.....</b>	<b>3</b>
Personnel Prematurely Transferred From Afloat Commands .....	3
Average Time Until PRD .....	3
Receiving Commands .....	3
Reasons for the Transfers of Men and Nonpregnant Women.....	4
Cost of Premature Transfers From Afloat Commands .....	5
Comparison of PCS Costs for Gender-Integrated Versus Nonintegrated Ships.....	5
<b>Discussion .....</b>	<b>6</b>
<b>Conclusions .....</b>	<b>6</b>
<b>References.....</b>	<b>7</b>
<b>Appendix—Categories of Transfers That Appeared in Records                     of Personnel in Sample .....</b>	<b>A-0</b>

### Distribution List

## List of Tables

1. Number of Premature Transfers From Gender-Integrated Ships in FY92.....	2
2. Paygrade at Time of Transfer .....	3
3. Types of Commands That Received Personnel.....	4
4. Reasons Why Men and Nonpregnant Women Were Prematurely Transferred.....	4
5. Estimated PCS Cost in FY92 .....	5

# **Introduction**

## **Background and Problem**

Personnel who are transferred prior to their prospective rotation date (PRD) not only constitute an unanticipated loss to their commands, but also impinge upon the budget if they must be moved to another geographic area. For gender-integrated ships, a major reason for transferring women prematurely is pregnancy. Navy policy (OPNAVINST 6000.1A) requires that pregnant women be transferred ashore by the end of the 20th week of gestation or when the ship deploys. Ever since women began serving in ships in 1979, losses due to pregnancy have been censured in terms of personnel loss and cost to the Navy. Men and nonpregnant women also experience premature transfers but few complaints are expressed over the cost to the Navy. The lack of concern over these other losses is probably due to familiarity. That is, commands have become accustomed to transferring personnel prematurely for humanitarian, disciplinary, and medical reasons. Pregnancy, however, is an additional cause of personnel loss and, in ships with women, a significant cause. While the number of pregnant women who are transferred due to pregnancy is being monitored by the Assistant Chief of Naval Personnel for Distribution, the dollar cost has never been calculated.

## **Permanent Change of Station Budget**

Permanent change of station (PCS) moves of Navy personnel and their families is a major expense in the personnel budget. For FY93, for example, \$650M was budgeted for moves. Approximately one third of these funds are mandated expenditures, used to move personnel who are new accessions, separating from the Navy, or whose homeport is changing. The remainder of the PCS budget, considered discretionary in the congressional budgetary process, is expended primarily on planned rotations. In FY93, for example, less than 10% of the discretionary PCS budget was projected for moves that occur prior to the member's PRD.

The cost, reason for, and number of personnel who will incur premature PCS moves is projected annually.<sup>1</sup> The most recent projection, for FY93, forecasted that 8,994 enlisted personnel would move early (8% of the discretionary moves) at a cost of \$27,673,187. The majority of these early moves (80%) occur because of decommissioning, base closing, or new construction. Limited duty transfers are the next most frequent reason (11%) followed by spousal collocation (3%). Less than 1% are pregnancy transfers that involve PCS costs.

## **Purpose**

The purpose of this analysis was to determine the PCS cost of moves from ships due to pregnancy. Additionally, the study estimated the cost of premature PCS moves if these ships had been crewed by men only.

---

<sup>1</sup>The PCS Move/Cost Prediction Model is maintained by the Distribution Management and Control Branch in the Office of the Assistant Chief of Naval Personnel for Distribution (PERS-46). The projections for FY93 were obtained directly from PERS-46.

## Method

### Sample Section

Using data available from the Enlisted Master Record, personnel who were stationed on gender-integrated ships during FY92 were identified. The transfer dates of all personnel who had rotated off these ships were compared with their PRDs to identify those who had transferred prematurely. For the purpose of the study, premature transfers were defined as transfers occurring more than 1 month prior to PRD.

Table 1 displays the number of personnel who prematurely transferred from gender-integrated ships in FY92. Since complete information was not available for all target personnel, the total sample is used for some analyses and attenuated samples are used in others. Of relevance for this report is the number of personnel with cost information. In Table 1, premature transfers are divided into two groups, those with and those without cost information. As shown, only 28% of those who prematurely transferred have cost information. Also, a disproportionate number of women have cost information as compared to men.

**Table 1**  
**Number<sup>a</sup> of Premature Transfers From**  
**Gender-Integrated Ships in FY92**

	Premature Transfers	Personnel Without Cost Information		Personnel With Cost Information	
		N	%	N	%
Men	3,536	2,926	83	610	17
Women	2,224	1,223	55	1,001	45
Total	5,760	4,149	72	1,611	28

<sup>a</sup>These numbers are probably underestimates, but only the number of women transferred for pregnancy could be verified through a separate database. According to the records in PERS-409 (Special Programs Assignment Branch), 915 pregnant women were transferred from ships in FY92; 753 of the 2,224 women in this sample were pregnant. Thus, we assume that the numbers in this table represent 80% of the total number of personnel transferring early from these ships.

Subjects were categorized into three groups. Women whose reason for transferring from a ship was pregnancy were categorized as the pregnant group. The remaining women who transferred prematurely constituted the nonpregnant women group. The last group consisted of men who were on gender-integrated ships and who transferred before their PRD.

The distribution of the three groups by paygrade is shown in Table 2. While similar percentages of personnel were in the middle paygrades (E-4 through E-6), a larger percentage of pregnant women were in the lowest paygrade than the other two groups and slightly more men than women were in the higher paygrades (E-7 through E-9).

**Table 2**  
**Paygrade at Time of Transfer**

Paygrades	Pregnant Women <i>N</i> = 753	Nonpregnant Women <i>N</i> = 1,471	Men <i>N</i> = 3,536
E-3	47	41	40
E-4 through E-6	53	56	53
E-7 through E-9	0	2	7

*Note.* Numbers are presented as percentages (because of rounding, percentages may not add to 100%).

### Data Analysis

The reason for transfer, time remaining until PRD, type of receiving command, and cost of PCS move were analyzed. In addition, an estimated cost of PCS moves if ships were *not* gender-integrated was calculated and compared to an estimated PCS cost for gender-integrated ships. The all-male ship estimation was calculated by applying the percentage of men who prematurely transferred from gender-integrated ships in FY92 to the total number of personnel on these ships (*N* = 30,431). The resulting number was multiplied by the average cost of PCS moves for men in order to determine the total amount of PCS move funds that would have been expended if these ships were crewed only by men.

## Results

### Personnel Prematurely Transferred From Afloat Commands

A comparison of the frequency of premature transfers was made among the three groups. The largest group to prematurely transfer was men (*N* = 3,536) followed by nonpregnant women (*N* = 1,471). A much smaller number of pregnant women (*N* = 753) transferred prematurely. However, proportionately more women than men moved prior to their rotation date, since the enlisted crews of integrated ships are approximately 75% male.

### Average Time Until PRD

Pregnant women had the most time remaining until their PRD when they were transferred, an average of 21 months. Nonpregnant women had an average of 19 months remaining until their PRD, whereas men had an average of 16 months until their PRD.

### Receiving Commands

The types of commands that received the members of these groups are summarized in Table 3. Due to missing data, an attenuated sample was used for this analysis and the number of personnel in each group is shown in the table. While all three groups were primarily transferred to shore commands in the continental U.S., a larger percentage of men than women were assigned to another afloat command.



**Table 3**  
**Types of Commands That Received Personnel**

Type of Command	Pregnant Women N = 692	Nonpregnant Women N = 783	Men N = 1,574
Shore	96	86	80
Sea	0	7	14
Overseas Shore	0	2	2
Nonrotated Sea	0	1	1
Neutral Duty	1	1	1
Preferred Overseas Shore	3	4	2

Note. Numbers are presented as percentages (because of rounding, percentages may not add to 100%).

### **Reasons for the Premature Transfers of Men and Nonpregnant Women**

The reasons for the premature transfers of men ( $N = 605$ ) and nonpregnant women ( $N = 307$ ) were compared. Table 4 shows the reasons for each group. Due to the large number of reasons for reassignment, related transfer codes were combined. Directed Transfers are transfers that occur for organizational reasons, such as a transfer to fill a critical vacancy or to reduce excess manning in a ship. The Disqualification category includes reasons such as medical/physical disqualification and loss of security clearance. Transfers that are classified as Member's Request include reenlistment incentive, request for homeport change, and Humanitarian transfers. Training and Collocation With Spouse, which the *Enlisted Transfer Manual* (Chief of Naval Operations, 1979) includes in the Member's Request category, are listed separately in the table, due to the large percentage of personnel transferring for these reasons. See the appendix for a complete list of the reasons under each of these three categories.

**Table 4**  
**Reasons Why Men and Nonpregnant Women  
Were Prematurely Transferred**

Reasons	Women N = 307	Men N = 605
Training at Member's Request	29	21
Directed Transfers	23	40
Collocation With Spouse	15	3
Disqualification	15	8
Drawdown	9	12
Member's Request	8	14
Other	2	1

Note. Numbers are presented as percentages (because of rounding, percentages may not add to 100%).

For the most part both groups transferred for similar reasons, although a larger percentage of women than men transferred to collocate with their spouse. Conversely, a larger percentage of men than women had Directed Transfers.

### Cost of Premature Transfers From Afloat Commands

The average PCS cost for members of each of the three groups was calculated. Men ( $N = 610$ ) had the highest average cost at \$1,305, followed by nonpregnant women ( $N = 308$ ) at \$718. Pregnant women ( $N = 693$ ) had the lowest average cost of \$103. One reason for the disparity between men and women is that men in the Navy typically have more dependents than women (Thomas & Edwards, 1989), which would increase their total cost to relocate. Also, since a larger percentage of men than pregnant and nonpregnant women were in the highest enlisted paygrades, they may have more dependents than the women. Another reason is that 95% of pregnant women incurred no cost for the move as opposed to 48% of nonpregnant women and 51% of men. These no-cost moves would have resulted from a transfer to a command within the same geographic area as the detaching ship. The range of PCS costs for pregnant women was \$0 to \$8,626 while the range for nonpregnant women was \$0 to \$14,123 and the range for men was \$0 to \$23,453.

### Comparison of PCS Costs for Gender-Integrated Versus Nonintegrated Ships

An estimate of the PCS funds expended for personnel prematurely transferring from gender-integrated ships was determined by applying the mean cost obtained for each subsample (i.e., personnel with cost data) to the total number who transferred. A second estimate was calculated for the hypothetical condition of male-only crews in these ships. Instead of 3,536 men transferring early from gender-integrated ships, it is estimated that 4,869 would not have completed their sea tour if the ships had been crewed by men only.

As shown in Table 5, the estimated PCS cost of moving personnel from gender-integrated ships in FY92 was less than the estimated cost would have been if these ships were not gender-integrated. It should be noted that due to missing data, the total PCS costs are underestimates. If data for pregnant women are an accurate reflection of the incompleteness of the samples of men and nonpregnant women, these estimates are about 80% of the actual cost.

**Table 5**  
**Estimated PCS Cost in FY92**

	Gender-Integrated Ships				Same Ships if Crewed by Men	Difference
	Pregnant Women	Nonpregnant Women	Men	Total		
<i>N</i> Transferring	753	1,471	3,536	5,760	4,869	
Mean (\$)	103	718	1,305		1,305	
PCS Cost (\$)	77,559	1,056,178	4,614,480	5,748,217	6,354,045	605,828

Note. PCS = Permanent Change of Station; Difference = PCS Cost for all-male crew minus PCS Cost for integrated crew.

## Discussion

It was unfortunate that so many of the fields in enlisted personnel files needed for this analysis lacked data. Moreover, the missing data were unevenly distributed among the three groups of interest. Less than 20% of the men who were transferred prior to their PRD had the reason coded or cost information available. The authors have questioned officers and senior enlisted personnel at the Bureau of Naval Personnel about this shortcoming, but none could explain why it occurs.

Women had more sea duty time remaining than men when they rotated. Navy policy requires that pregnant women be transferred regardless of time remaining until PRD. Edwards (1993) also noted a gender difference in noncompletion of sea duty and identified a possible reason that would apply to nonpregnant women. He suggested that the limited number of shipboard billets for women results in a longer gap between completion of recruit training and commencement of first sea tour than occurs for men. As a consequence, the expiration of women's 4-year enlistment occurs prior to their PRDs and they are viewed as premature transfers.

Post-sea duty assignment practices for men and nonpregnant women appear to be quite similar. Somewhat more women than men went to shore commands, but the rules regarding collocation of spouses could have accounted for the difference. That is, military married to military are not assigned simultaneously to sea duty, unless they volunteer for concurrent sea tours. Therefore, transferring an afloat sailor to achieve spousal collocation, a reason cited more often for women than men, would usually result in a shore assignment.

Differences were found in the reasons why men and nonpregnant women were transferred. More women than men were transferred for training, suggesting that more met the qualifications for fleet input to a Navy school. Proportionately more men than women were directed transfers, a move for administrative reasons, and more women than men were transferred to a geographic area where their spouse was assigned.

The PCS cost for pregnant women transferring off ships was very low because the vast majority stayed within the same geographic area. The PCS cost of moving nonpregnant women was less than for men. This difference is probably due to the fewer dependents of Navy women as compared to Navy men. Proportionately fewer enlisted women than men are married, fewer have children, and those who are parents have fewer children. As a consequence, women on the average have less household goods and fewer people to move. Despite the fact that proportionately more women than men transferred off ships prematurely, the cost of these moves was lower than if a smaller group of male personnel had been moved.

## Conclusions

1. Proportionately more women than men are prematurely transferred off ships. The primary reason is pregnancy. Men who are transferred early complete more of their assigned tour than women who leave early.
2. Premature PCS transfers of women from ships cost less than PCS transfers of men.
3. Although fewer unplanned losses would occur if ships were crewed solely by men, PCS costs would not be reduced.

## References

- Chief of Naval Operations (1979). *Enlisted transfer manual*. Washington, DC: Author.
- Edwards, J. E. (1993). *Noncompletion of sea-duty tour (Letter Report Ser 01E/447)*. San Diego: Navy Personnel Research and Development Center.
- Office of Chief of Naval Operations. (1989). *Management of pregnant servicewomen (OPNAVINST 6000.1A)*. Washington, DC: Author.
- Thomas, P. J., & Edwards, J. E. (1989). *Incidence of pregnancy and single parenthood among enlisted personnel in the Navy*. (TR-90-1). San Diego: Navy Personnel Research and Development Center.

**Appendix**

**Categories of Transfers That Appeared  
in Records of Personnel in Sample**

## **Categories of Transfers That Appeared in Records of Personnel in Sample**

### **Directed Transfers**

- Lateral Transfer
- Excess
- Flag Request
- Administrative Transfer
- Fill High Priority Billet
- Navy Enlisted Classification (NEC) Deletion
- Directed Rating Conversion
- Directed Naval Military Personnel Command (NMPC) Transfer
- New Construction Requirement
- Activity Relocation
- Naval Operation Program (NAVOP)
- Delay in Member's Request
- Permanent Change of Station (PCS) Funding Considerations

### **Member's Request**

- Split Tour
- Reenlistment Incentive
- SWAP
- Humanitarian
- Homeport Change
- Special Program Volunteer
- Score Conversion
- Comply With Guarantee

### **Disqualification**

- Overseas Duty Disqualification
- Special Program Disqualification
- Physical/Medical Disqualification
- Loss of Security Clearance
- Service Craft Disqualification—Other than Pregnancy

## **Distribution List**

Assistant Secretary of the Navy (OASN [M&RA])

Chief of Naval Personnel (PERS-00W), (PERS-01JJ), (PERS-2), (PERS-4), (PERS-6)

Defense Technical Information Center (DTIC) (4)

Naval Health Research Center

Superintendent, Naval Post Graduate School

Superintendent, U.S. Coast Guard (DH)