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Increased PERSTEMPO, Retention, and Navy Policy

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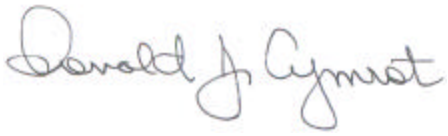

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Executive Summary

Background

Since the terrorism attacks of 9/11, the Navy has been operating under a heightened state of alert. To fulfill its missions, the Navy sought to increase its forward presence through two means:

- Extension of deployments beyond 6 months
- More rapid turnarounds (TARs).

Using historical data, CNA has been analyzing the retention implications of Operation Enduring Freedom and Operation Iraqi Freedom. This annotated briefing summarizes our findings and some ways to mitigate adverse effects, should they occur.

Findings

We examined data from Desert Shield/ Desert Storm (DS/DS) and looked at the short-term impact of the conflict on attrition. We found that attrition dropped during the conflict, particularly for ships deployed to the region. The deployments following DS/DS, however, were characterized by a sharp rise in attrition—indicating that attrition may have been temporarily delayed.

In addition, previous CNA statistical analyses of sailors with higher than normal PERSTEMPO indicate that there may be long-term consequences for retention. An examination of reenlistments before PERSTEMPO restrictions were formalized in 1986 shows that high underway time (non-deployed) and long deployments may adversely effect reenlistments. An analysis of post-1986 attrition shows a similar relationship between underway time (nondeployed) and attrition but no correlation between deployment length and attrition. Anecdotally, the long deployments in the 1990s were associated with morale-boosting missions unlike earlier long deployments that were more routine in nature.

So far, we have seen Navy attrition drop since 9/11, particularly for ships deployed to theater. We expect that the current operations will continue to reduce attrition in the short run as the operations enter a new phase. Based on DS/DS, however, it appears likely that attrition will rise once more following the end of tensions. Indeed, retention may fall before that if the high PERSTEMPO continues over the next years. We estimate that between $220 and $345 per month would offset the retention effects of long deployments, although higher amounts may be necessary if PERSTEMPO rules are broken consistently over the foreseeable future.

Two Potential Policy Levers

In response, we helped the Navy design two compensatory pays to offset high PERSTEMPO. The first, Sea Pay Plus, uses the existing career sea pay program (CSP) to offset the cost of long deployments. It would double the amount of sea pay sailors earn after 6 months deployed. Sailors near their first reenlistment would receive about $300 per month in extra pay. Rates are lower for the most junior sailors; the most senior sailors (about 7 percent of the typical battle group) would also receive somewhat less because they reach the $750 statutory maximum for CSP. Because Sea Pay Plus uses an established program (CSP) as the pay vehicle, it would not require legislative approval and could be implemented quickly.

Our second proposal calls for a restructuring of the High Deployment Per Diem, or ITEMPO pay, that Congress authorized but suspended. In its original form, ITEMPO pay discouraged the services from deploying servicemembers above the mandated time-away threshold by setting the pay at $100 per day once the servicemember exceeded the threshold. In our restructuring of ITEMPO, we proposed compensating sailors more along the dimensions of PERSTEMPO—both for excessive time away over a 2-year period and, separately, for deployments over 6 months in duration. To offset retention problems, we begin rates at $100 per month for PERSTEMPO slightly above normal and propose increasing them to $300 per month as PERSTEMPO increases. As a result, the pay is no longer punitive to the Navy. Instead, the pay rates should be just sufficient to compensate sailors for the additional hardships of extra time away from home. The drawback to this pay option is that it requires congressional approval. Consequently, even if Congress approves a revision to the existing legislation, it would not be available if retention problems emerge in the short term.

We recommend that the Navy use Sea Pay Plus in the near term if PERSTEMPO causes retention problems. In the longer term, the Navy should push for a revision to the ITEMPO legislation. Should the ITEMPO replacement become law, Sea Pay Plus would no longer be necessary.

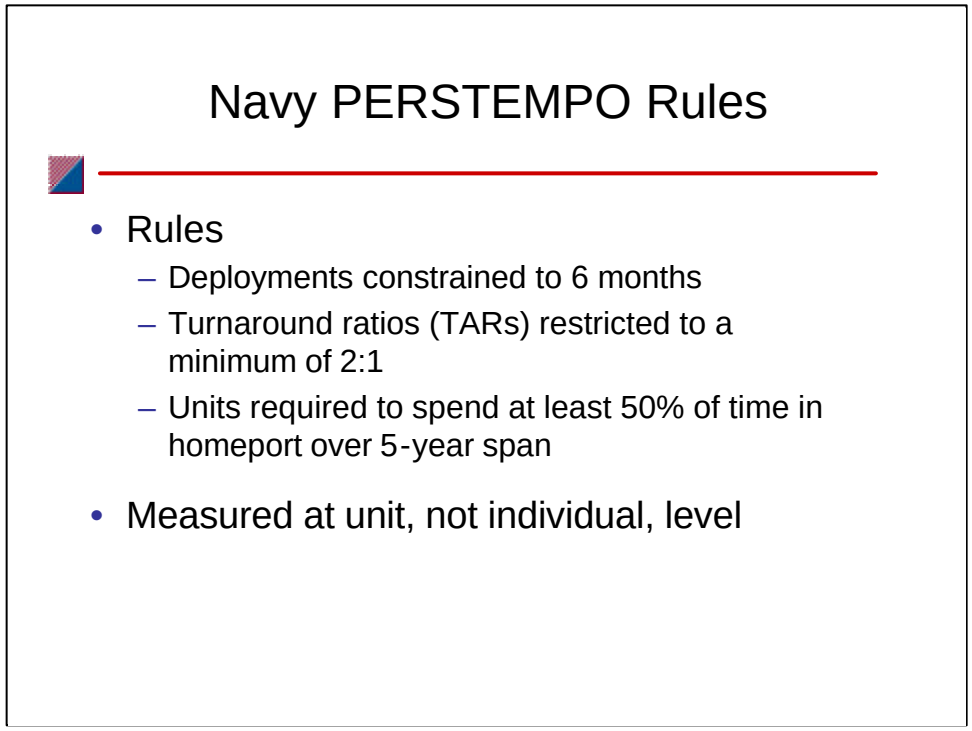
Increased PERSTEMPO, Retention, and Navy Policy

Heidi L. W. Golding
Henry S. Griffis

Since the terrorism attacks of 9/11, the Navy has been operating under a heightened state of alert and has been planning for several contingency operations. The Navy has been particularly concerned with increasing its forward presence in wartime conditions and has used two options to effect that change:

- Extension of deployments beyond 6 months
- More rapid turnarounds (TARs).

The Director of Military Personnel, Plans and Policy Division (N13) asked CNA to examine the implications for sailors of wartime conditions (additional stresses and workload) and increased personnel tempo (PERSTEMPO). This annotated briefing focuses on potential ramifications for retention associated with higher PERSTEMPO and some means to mitigate adverse effects, should they occur.



The Navy institutionalized its PERSTEMPO program in the mid-1980s, although PERSTEMPO limits existed long before then. Those policies still serve as the Navy's guidelines; they may, however, be broken under special circumstances. The rules restrict the length of deployments, set a floor for the time between deployments, and constrain the total time away from homeport.

Although the policies were formalized, in part, to preserve sailors' quality of life and retention, the Navy has imposed these standards on units only; it has not restricted individual sailors' time at sea. In the FY 2000 National Defense Authorization Act (NDAA), however, Congress included a High Deployment per Diem. The legislation required the services to monitor individual servicemembers' tempo (ITEMPO) and to pay $100 per day to servicemembers deployed for more than 400 days over a rolling 730-day period. That pay was suspended in light of the military operations since 9/11.

Outline

- What happened during past crises?
- What have we found with OEF so far?
- Will breaking PERSTEMPO policy hurt retention?
- Can pay offset retention effects?
- What do we recommend?

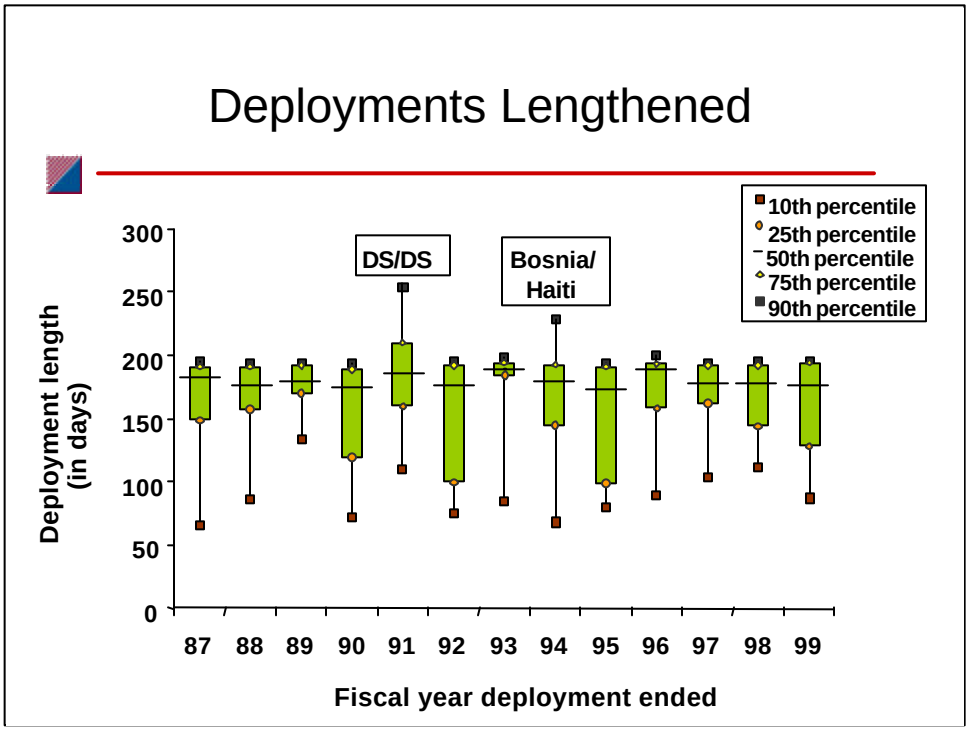
In this annotated briefing, we analyze historical and recent data on retention to gain insights into the likely effects of Operation Enduring Freedom (OEF) and other current operations on sailors' retention. Because we find that retention could fall as a result of the ongoing operations, we consider several potential means to offset problems. We conclude by describing two pay options that we recommend.

What Happened During Past Crises?

Based on Desert Shield/Desert Storm (DS/DS):

- Longer than usual deployments
- Simultaneous drop in fleet attrition
- But, subsequent rise after DS/DS

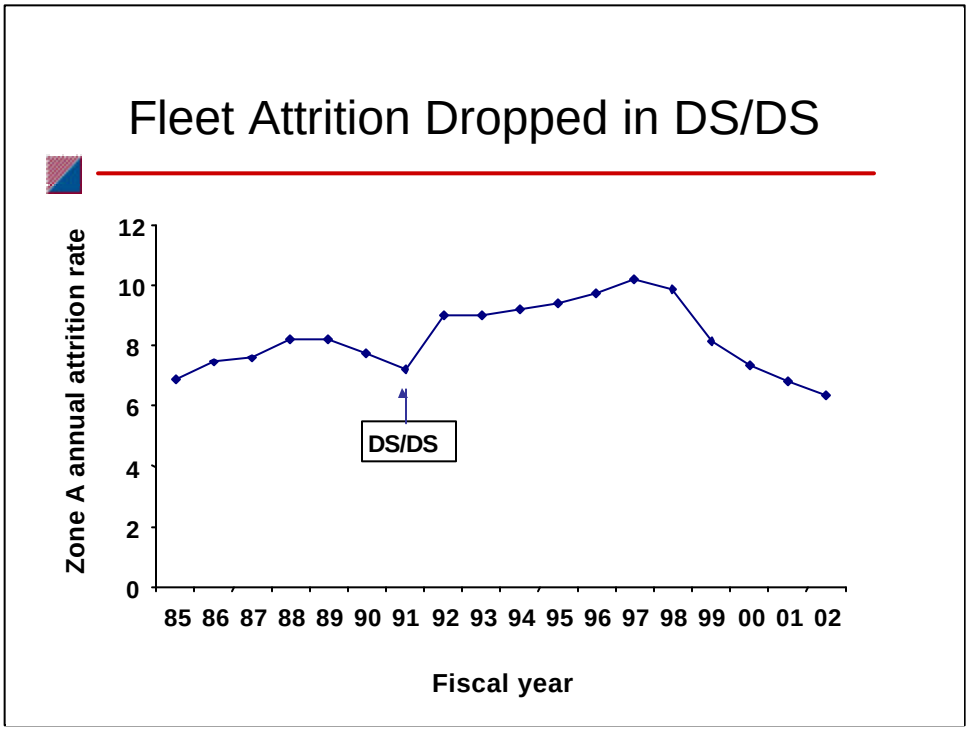
In the following slides, we present historical deployment and attrition data highlighting the Navy's experience during Desert Shield/Desert Storm. We focus on attrition, not reenlistment, behavior because stop-loss rules during the conflict likely influenced reenlistment rates more than attrition rates.



In this slide, we examine Navy deployment lengths since the PERSTEMPO rules were formalized. Aggregating individual ship data from the CNA resident Ship Information Digest (SID), we organized deployment lengths by the ending date of the deployment. Each bar represents the range in deployment days for deployments ending in that fiscal year. For example, half of all deployments that ended in FY87 lasted less than 180 days (the horizontal line represents the median), 25 percent lasted 150 days or less, and 75 percent were 195 days or less.

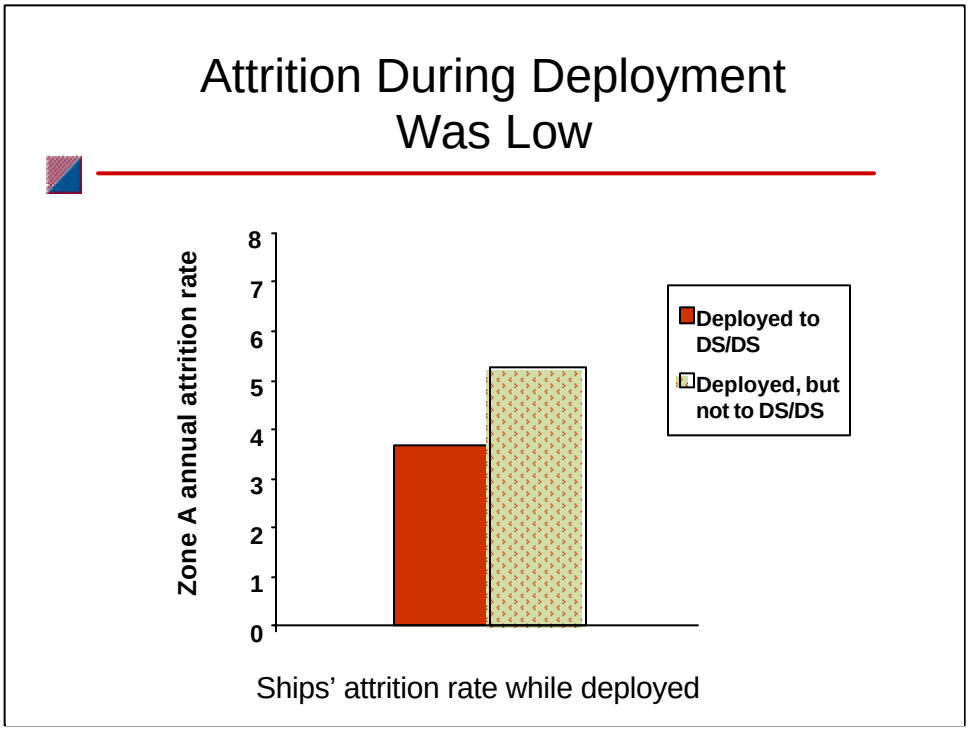
Although median deployment length over this period has been almost constant at around 180 days, we see sizable variation in the range of deployment lengths. Spikes in deployment length correspond to U.S. participation in conflicts. For example, deployments still averaged about 180 days in FY91 (the year Desert Shield/Desert Storm occurred), but the Navy extended some deployments a month or more beyond the norm because of the conflict. The Navy also prolonged a few deployments during the Bosnia/Haiti crises in FY94.

We defined a deployment as more than 56 days away from homeport (not including extended overhauls and maintenance away from homeport). The data sample includes all ships except submarines and ships homeported overseas because ship's employment data for those categories of ships are unreliable. In addition, because of imprecision in the data, some of our reported deployment lengths are potentially overstated by up to 1 week.



In this slide, we show Navy-wide cross-sectional fleet attrition rates for zone A sailors (length of service (LOS) 2 through 6). The Navy overall experienced a drop during the extended operations of Desert Shield/Desert Storm, although attrition following the operations appears to be higher than expected. The decline in attrition implies even higher readiness during crises than the Navy would otherwise experience.

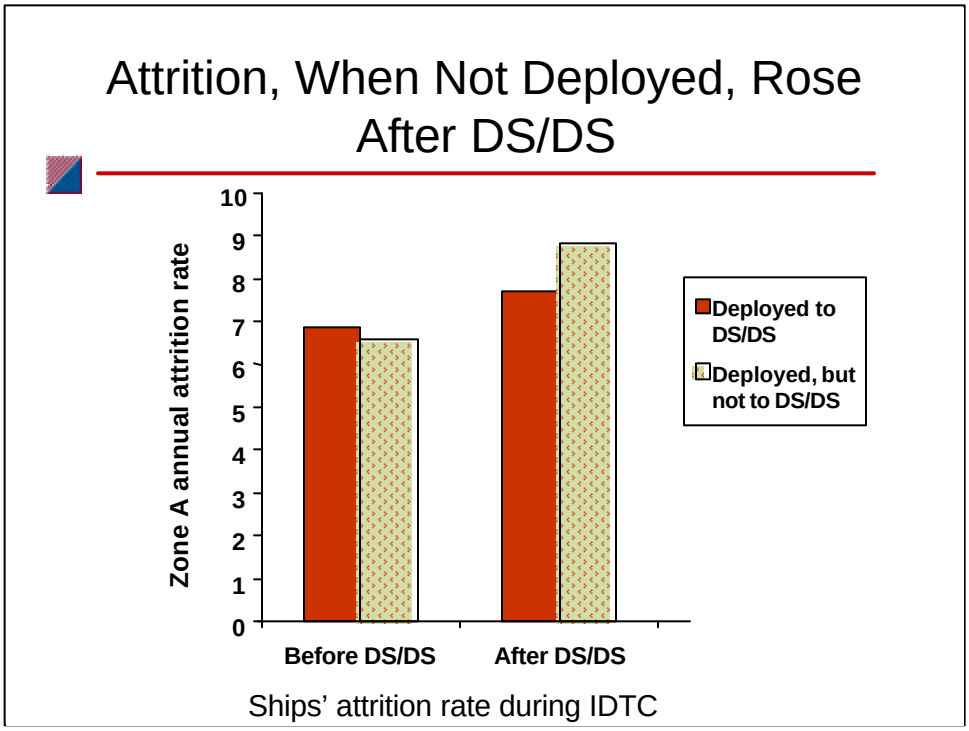
Although the hardships of higher PERSTEMPO imply lower retention, it appears that conflicts (associated with higher PERSTEMPO) at least delay departures from the Navy. Indeed, anecdotally, we hear of the morale-boosting effect of participating in national crises or special missions that counteracts the negative impacts of longer deployments. Alternatively, commanders may be more reluctant to let sailors attrite during high-tempo operations because, as workload increases, they may not have excess personnel or be able to readily obtain replacements.



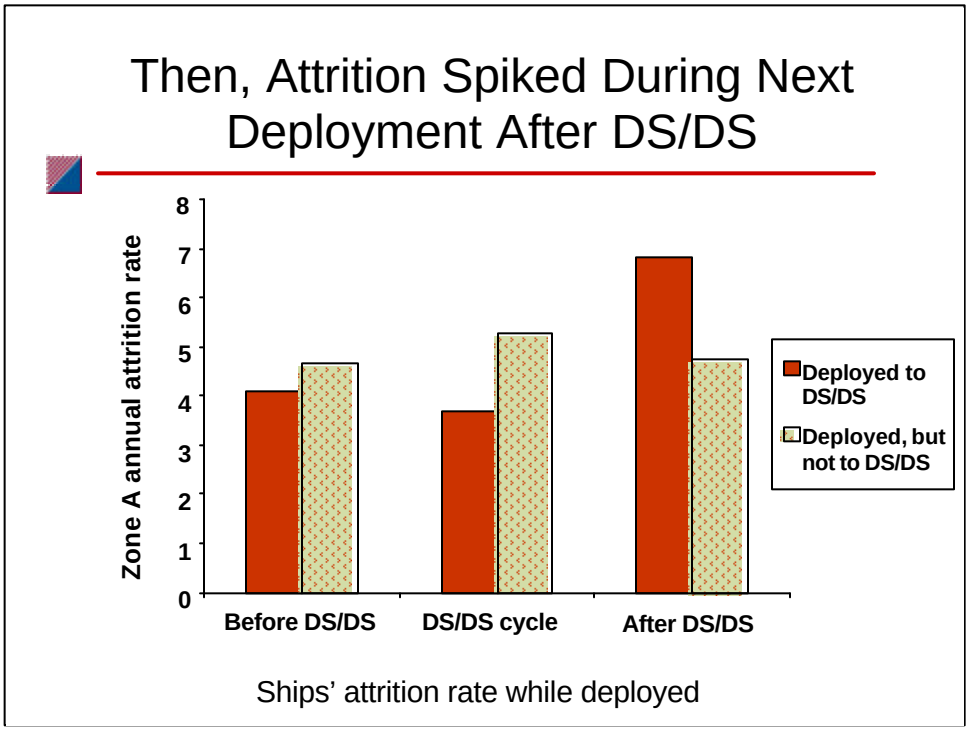
Although attrition dipped for the Navy overall during Desert Shield/Desert Storm, we expect that the conflict had disparate impacts across the Navy. Here, we present the annualized zone A attrition for ships deployed at the time of DS/DS. We compare attrition rates for those ships that participated in the conflict with those that were deployed, but elsewhere, during the conflict.

The data confirm that junior sailors who participated in DS/DS have significantly lower attrition than junior sailors who did not. For ships deployed to the conflict, attrition averaged 3.7 percent compared with 5.3 percent for ships deployed elsewhere—a rate almost 30 percent lower, despite the fact that DS/DS deployments were significantly longer (averaging about 200 days versus 165 days).

These data include only surface combatants. We used ship employment histories based on the SID to identify ships deployed during the conflict. We considered ships deployed anytime between September 1990 and June 1991 as deployed during the conflict. To identify ships deployed to the conflict, we used [1]. Because of unreliable deployment data for some ships, our final sample included 27 ships deployed to Desert Shield/Desert Storm and 12 ships deployed elsewhere. Because of the small sample of ships not deployed to the region, the attrition rates are sensitive to individual ship's inclusion or deletion from the sample. Using other reasonable samples, however, tended only to increase the disparity in attrition rates.



In this slide, we again compare the attrition rates for ships deployed to Desert Shield /Desert Storm and those deployed elsewhere, but we report the average attrition rates for their interdeployment training cycles (IDTCs)—both immediately before and after the conflict. In the period before DS/DS, the two groups look similar, with attrition rates hovering between 6.5 and 6.75 percent. After the conflict, both groups experienced an increase in attrition. We cannot be certain to what extent the aftereffects of the conflict and the beginning of the drawdown contributed to the increase in attrition. The pattern in post-conflict attrition, however, is particularly interesting. Ships deployed to the conflict had lower attrition rates than ships deployed elsewhere, with junior attrition about 13 percent lower.



By observing attrition behaviors for deployments before and after the conflict, we have some evidence that attrition may have been temporarily suppressed for those ships that deployed to DS/DS. A comparison of attrition rates for the deployment following Desert Shield/Desert Storm shows about a 30-percent difference in attrition. Ships deployed to the conflict had rates of almost 6.8 percent versus 4.7 percent for ships deployed elsewhere.

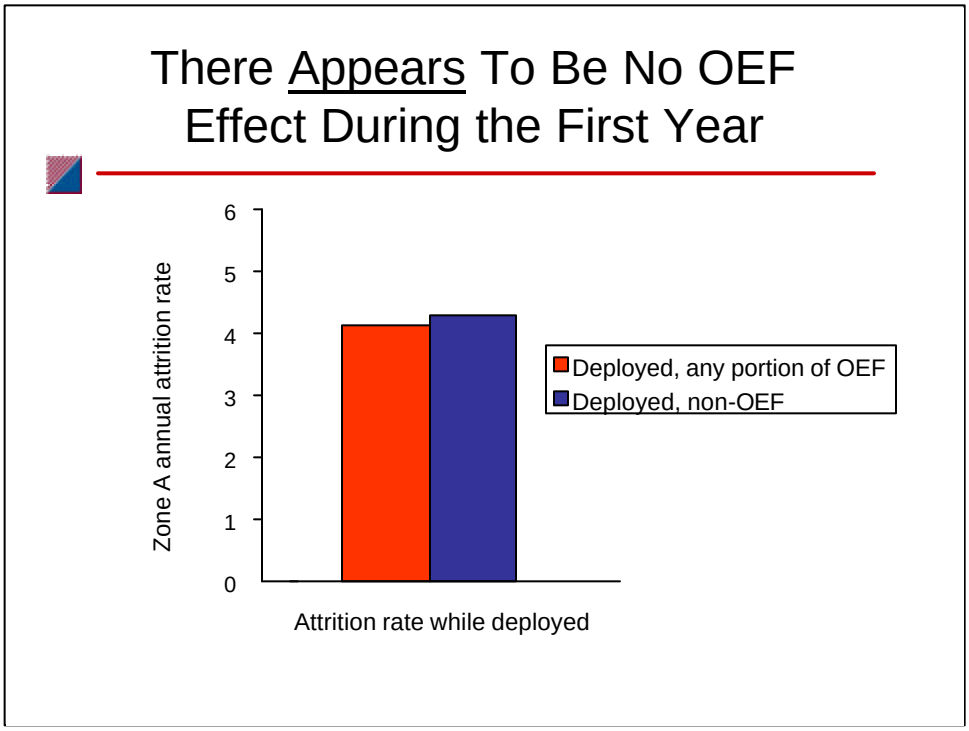
We cannot rule out other reasons for this pattern, however. For instance, ships deployed to Desert Shield/Desert Storm may have experienced greater than usual deterioration in their material condition, leading to sailors working harder on subsequent deployments and to higher attrition.

What Are Our Post-9/11 Findings So Far?

- Attrition for OEF deployments dropped
  - "Morale effect" of responding to a crisis may explain decline
- But, Navy may face subsequent increases

Based on the Desert Shield/Desert Storm experience, we would expect a decrease in attrition for OEF deployers, but with the potential for subsequent increases.

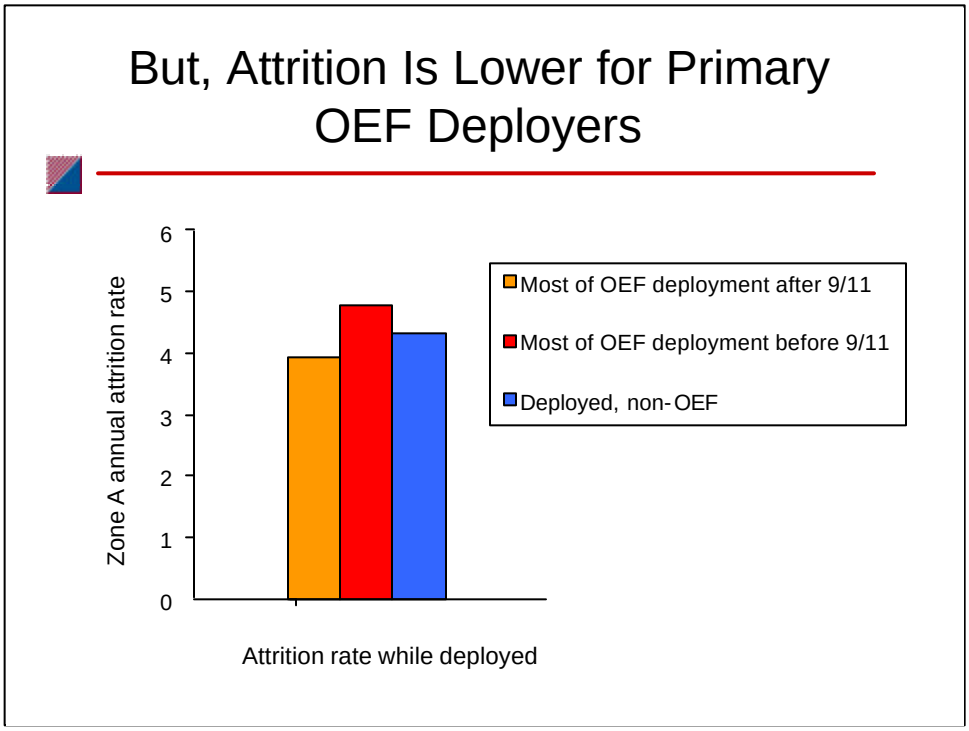
In the following slides, we present attrition data for ships deployed from the time of the terrorism attack in September 2001 through June 2002 (which corresponds roughly to the length of DS/DS operations).



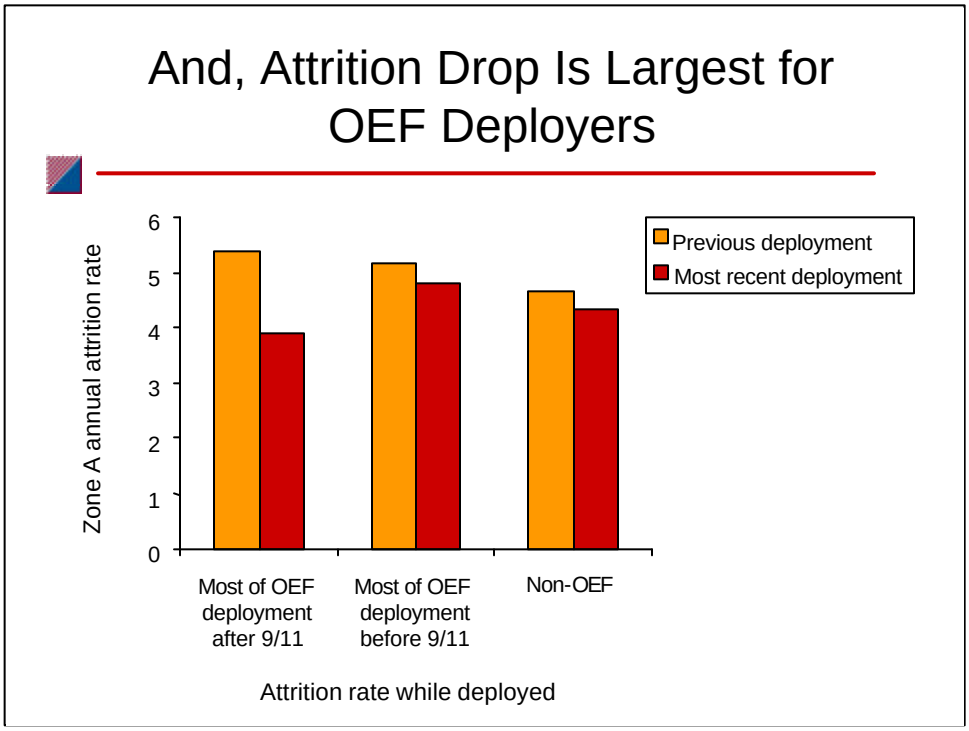
If OEF were to mimic Desert Shield /Desert Storm, we would expect attrition to drop for the Navy overall and for deployers involved in the conflict in particular. Navy-wide data show large improvements in retention over the time frame, although the boost is probably also fueled by the downturn in the economy and improvements to military compensation.

In this slide, we present the annualized zone A attrition for ships deployed to theater between 11 September 2001 and June 2002 compared with ships deployed during the same time frame but elsewhere. Unlike DS/DS, the data do not show significant differences in attrition among junior sailors who participated in OEF versus those who did not. For ships deployed to the conflict, attrition averaged 4.1 percent compared with 4.3 percent for ships deployed elsewhere. Because the Navy attempted to keep deployments to about 6 months during this timeframe, deployment lengths for the two groups were similar.

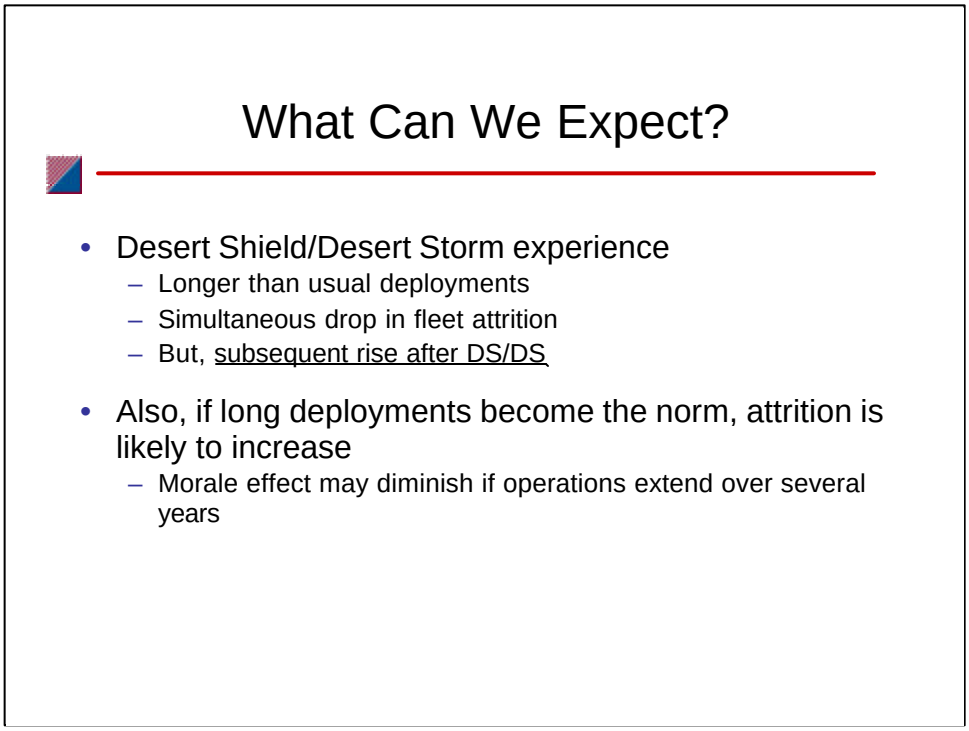
These data include only surface combatants with deployments completed between September 2001 and June 2002. To identify ships deployed to the conflict, we used published information from the *Navy Times* and other sources. Because of unreliable deployment data for some ships, our final samples included 20 ships deployed to theater (e.g., the Indian Ocean and the Red Sea) and 5 deployed elsewhere. Because of the small sample of ships not deployed to the region, the attrition rates are sensitive to individual ships' inclusion in or deletion from the sample.



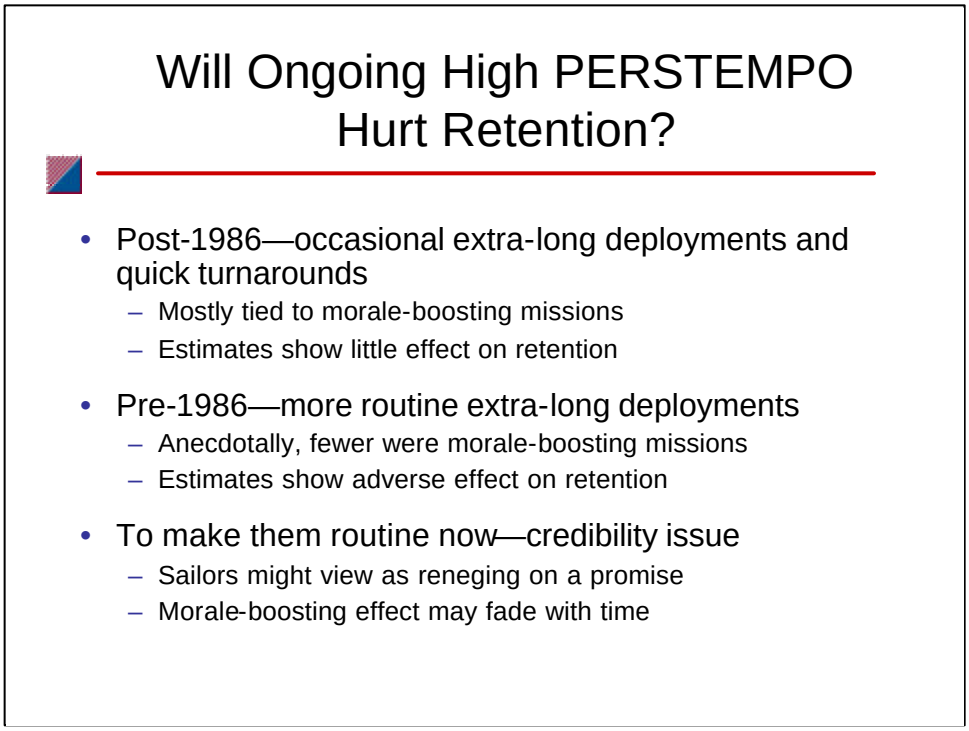
Next, we divided our sample of ships deployed to OEF by whether the majority of the deployment occurred before or after 9/11. Here, a different pattern in attrition emerges. For ships with most of their deployments occurring after 9/11, zone A attrition rates averaged 3.9 percent compared with 4.8 percent for those ships whose deployments ended shortly after 9/11. This is a drop of about 20 percent. In addition, those ships deployed to OEF after 9/11 had about a 10-percent lower attrition rate than those deployed elsewhere. This overall drop in attrition after 9/11 could be caused by the continued interest among Navy leadership in reducing separations from the Navy. The differential, however, between ships deployed to OEF and non-OEF locations suggests that the conflict does have at least a short-term effect on attrition.



The most striking result shows up when comparing attrition rates on the same ships for the OEF time period versus previous deployments. For the primary ships deployed to OEF after 9/11, zone A attrition dropped the most—from 5.4 percent to 3.9 percent. This is a drop of more than 25 percent. The other two groups' attrition declined by about 10 percent.

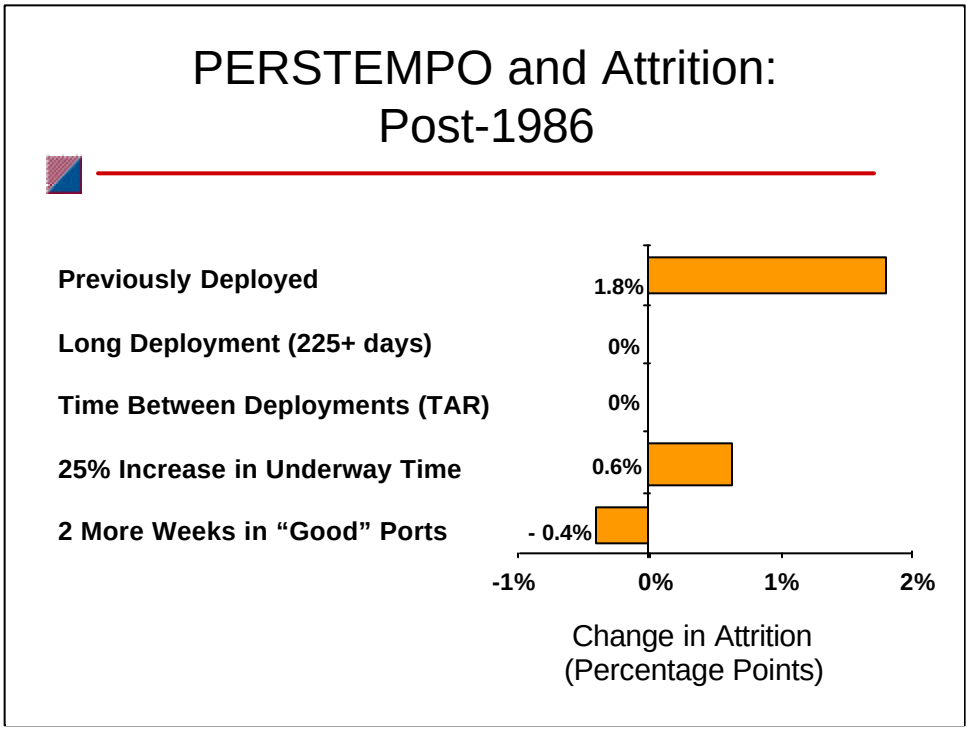


We expect that the current operations will continue to reduce attrition in the short run because the mission has evolved and the Iraqi mission is entering a new phase. However, based on recent history, it appears likely that attrition will rise once more following the end of tensions. But, if heightened operations extend several years, attrition may begin to rise before that. It will be necessary to monitor attrition over this period to see whether attrition among frontline sailors starts to rise.



The previous slides focused primarily on short-term impacts of conflicts and higher PERSTEMPO on sailors' attrition. Here, we present longer term retention implications (both attrition and reenlistment behavior) based on previous CNA statistical analyses examining sailors with higher than normal PERSTEMPO. A recent study examining fleet attrition after the PERSTEMPO rules were instituted shows that little or no change in retention results for sailors deployed over 8 months [2]. The extra-long deployments from this period were typically associated with crises. Sailors identified these deployments as important and worth the extra hardships. Long deployments before the PERSTEMPO rules in 1986, however, were not necessarily associated with crises and affected retention negatively [3].

Of course, history does not mimic current conditions perfectly. For example, no military operations in recent history lasted more than a year, let alone several years, as some expect. Despite the lack of similar conflicts in the recent past, we believe that the retention effects ought to be small because of the crisis response nature of the current missions. The morale-boosting effect may wane, however, if the crisis continues over several years and sailors perceive long deployments as normal operations. In that case, the Navy can expect more harm to retention. In addition, if the Navy considers breaking PERSTEMPO policy on a routine basis, at least in the short term, sailors may view the change as reneging on a promise. In this case, the adverse effect on retention could exceed historical effects.

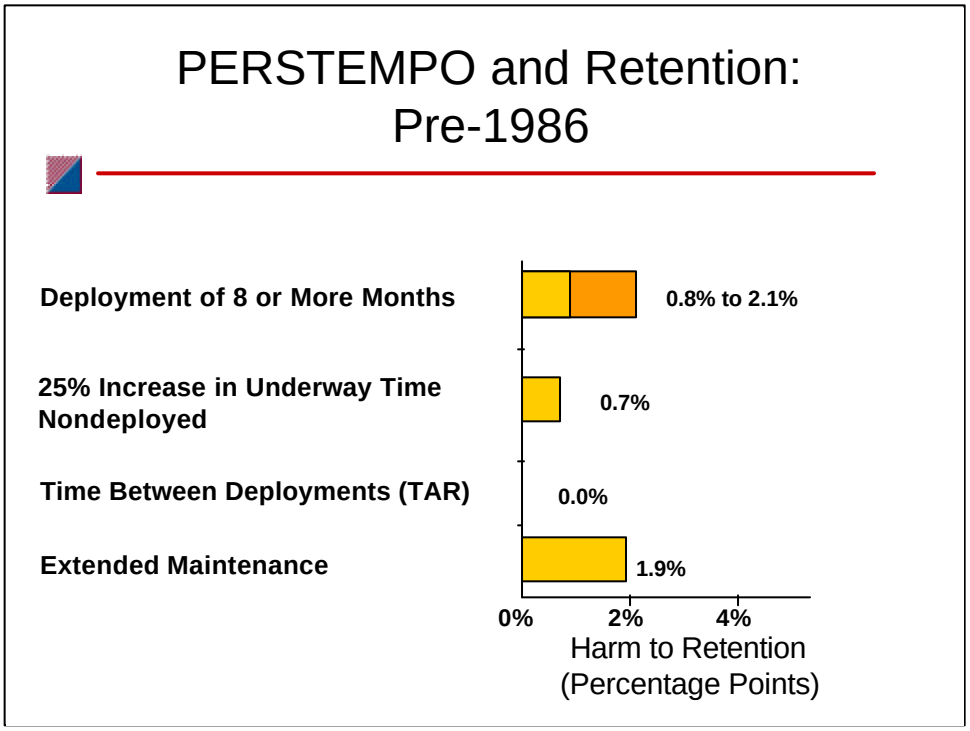


Summarized above are the results of a recent CNA study that examined the long-term effects of high PERSTEMPO on fleet attrition [2].

Of the measures related to PERSTEMPO, whether sailors had been deployed had the largest influence on attrition. Sailors who had been deployed had much higher attrition rates than those who had not. Although the sailors understood when they enlisted that they would deploy, the deployments must have fallen short of their expectations. The study, however, did not find a correlation between long deployments and attrition. The study used post-1986 data, and most of the long deployments occurred during Desert Shield/Desert Storm. Anecdotally, these long deployments were morale boosting.

Generalizing the results, we find that it wasn't the amount of time deployed or between deployments that was important. Rather, what sailors did during that time influenced attrition. For example, time spent in "good ports"—such as Singapore or in Europe—lowered attrition, whereas more time spent in "bad ports"—such as Bahrain—actually increased attrition. In addition, more time under way, not deployed, was associated with higher attrition. This is not surprising considering that time away involves long working hours and unpredictable scheduling.

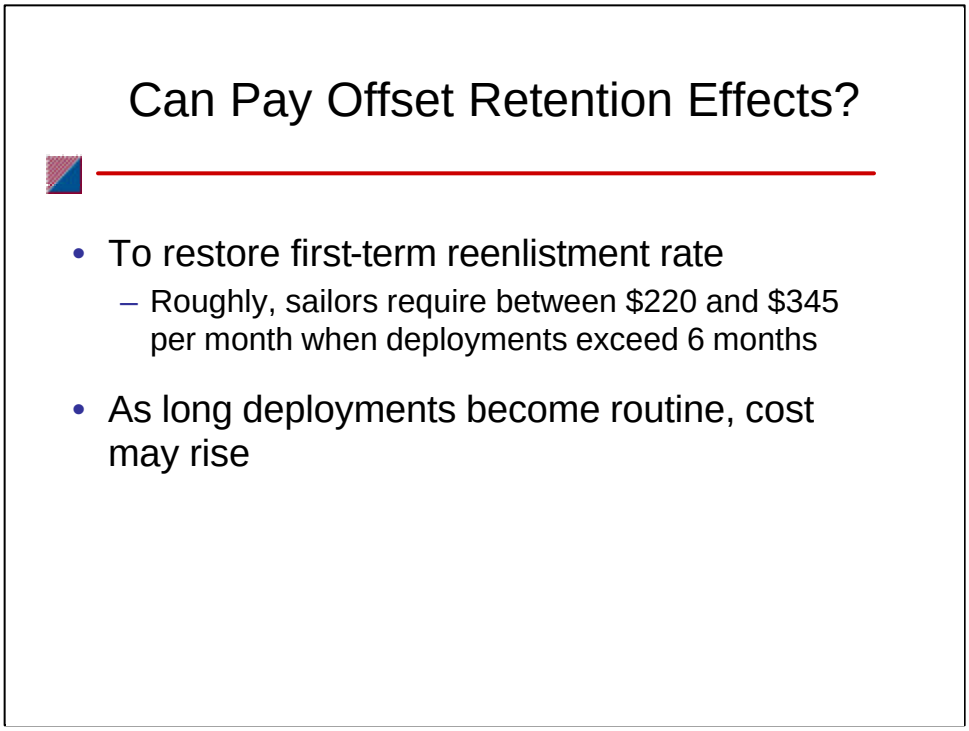
A forthcoming CNA annotated briefing [3] discusses the relationship between PERSTEMPO and reenlistments following the 1986 implementation of the PERSTEMPO rules. In short, the results are consistent with those above: long deployments and short TARs do not appear to lower reenlistments substantially.



This slide shows the results of previous CNA research linking individual reenlistment behavior to PERSTEMPO before the 1986 policies [4]. In contrast to the more recent studies, it found that sailors who had experienced more difficult PERSTEMPO have lower retention.

Examining sailors reenlisting from FY77 through FY88, researchers found that long deployments worsen first-term reenlistment between 0.8 and 2.1 percentage points. The data primarily capture deployments before the PERSTEMPO policies were formalized. During that time, the Navy routinely deployed for 6 months or longer. Sailors were more likely to expect deployments of 7, 8, or more months throughout their careers. In addition, the long deployments were often not linked to major crises. We surmise that the differences in study results reflect the changed use of long deployments after 1986.

The study also indicated that reducing the time between deployments, holding all else constant, has no impact on reenlistments. What sailors are doing and their quality of life during the IDTCs are important to retention, not the amount of time spent between deployments. For example, spending more time in arduous conditions, such as under way or in major maintenance, decreases reenlistments.

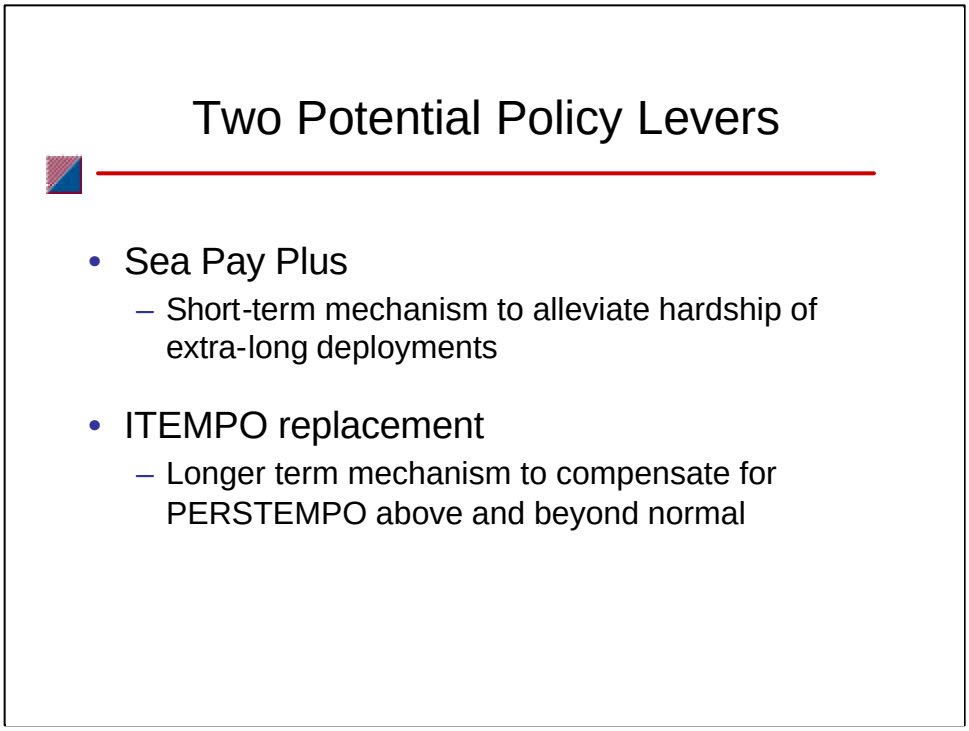


Selective reenlistment bonuses (SRBs) can be used to increase retention and, thus, counteract the effects of higher PERSTEMPO; however, we'd rather target the dollars to those directly affected by higher PERSTEMPO. Targeting should be more cost-effective so that the Navy does not pay sailors who did not experience the hardship.

Even though we cannot be certain of the magnitude of the retention impacts resulting from longer deployments during the current crisis, we suggest that the Navy be prepared to address a negative impact of -0.8-percent retention (the lower end of the estimated range) immediately. In [3], researchers found that a one-level SRB could ameliorate a 2.5-percentage-point drop in first-term reenlistments. Based on their lower estimated effect on retention, a 0.33-level bonus would compensate for an additional 100 days of deployment.

To approximate the monthly compensation a sailor would require for the extra duty, we considered the typical E-4 sailor with 4 years of service earning $21,000 annually in basic pay. An E-4 would require about $2,300 for an extra 100 days, or $690 per additional month deployed. Because sailors from the pre-1986 sample experienced extra-long deployments more routinely, we assumed that, when those sailors experienced an extra-long deployment, the measured retention effect reflected the compensation sailors required for the past extra-long deployment and the expectation that long deployments would be the norm [5]. If sailors expect either one or two additional extra-long deployments over a 20-year career, sailors require between $220 and $345 extra per month to compensate them for each additional month deployed.

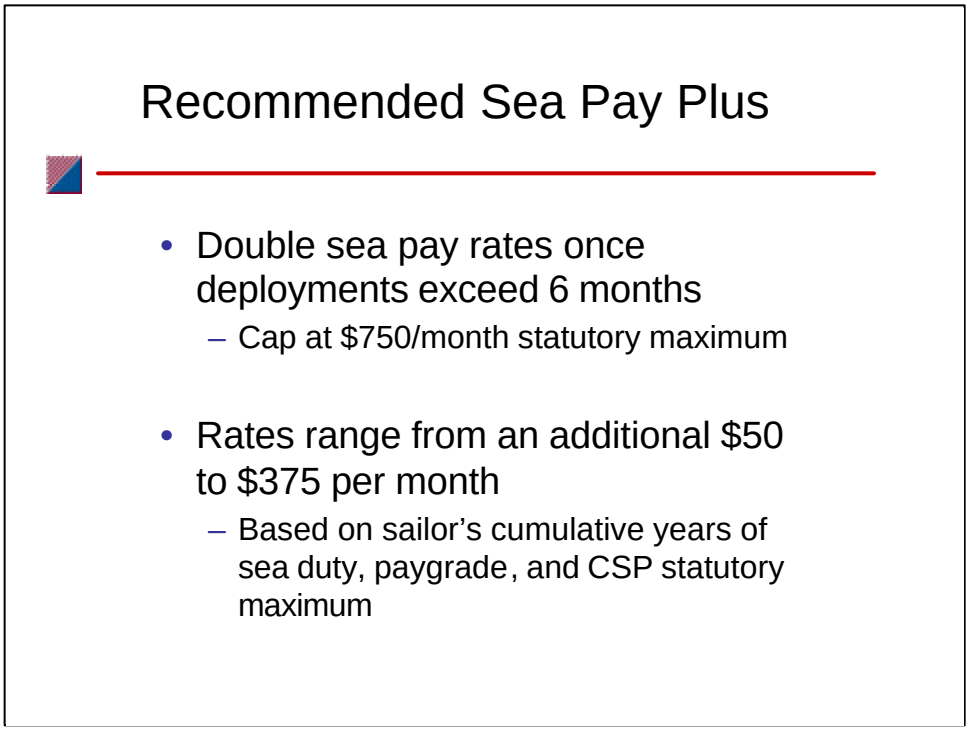
Besides being prepared to compensate sailors for a small negative retention effect, we recommend that the Navy continue to monitor the retention environment carefully. Should heightened military operations and higher PERSTEMPO continue indefinitely, we expect that the negative impact on retention will rise and the Navy may need to increase compensation.



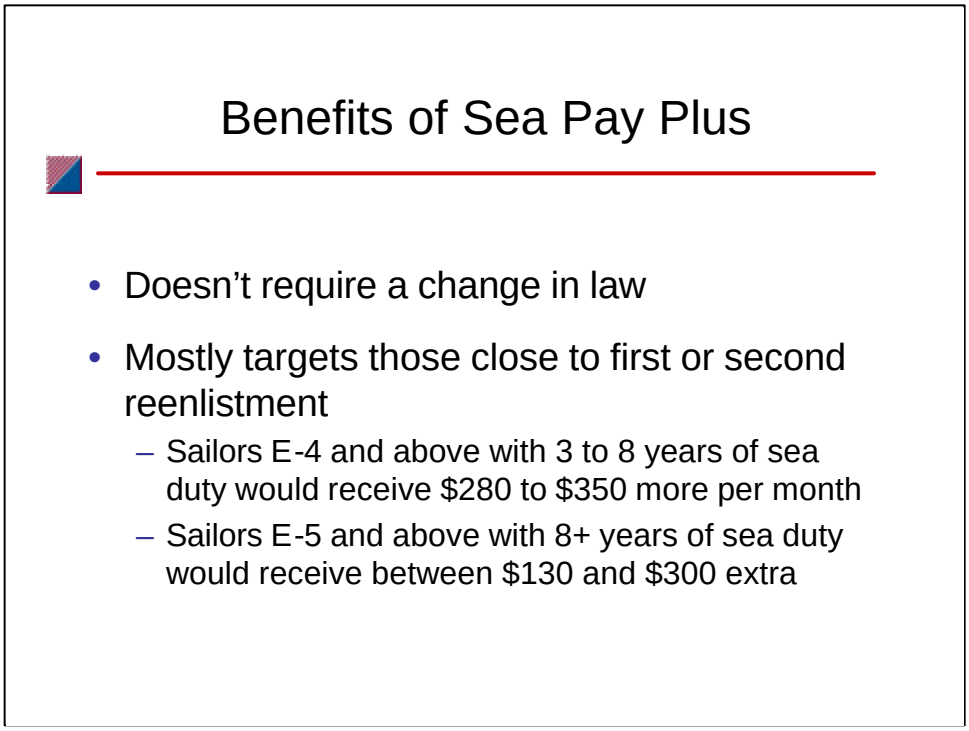
How might the Navy address the impact of breaking PERSTEMPO? We helped the Navy design two compensation pays. Our first proposal was to compensate sailors solely for extra-long deployments. Called Sea Pay Plus, it uses the existing Career Sea Pay (CSP) program as the pay mechanism. One important advantage of the program is that it could be implemented quickly. Because current sea pay rates are below the statutory maximums, temporary—or even permanent—increases in rates would not require congressional approval.

We also revisited the ITEMPO pay, or the High Deployment per Diem, which Congress authorized but suspended. In its original form, ITEMPO pay effectively prevented the services from deploying servicemembers excessively. By setting the pay at $100 per servicemember per day, the pay far exceeded the amount needed to compensate the average sailor for high TEMPO. Instead, it served to discourage the services from allowing their servicemembers to exceed the mandated time away thresholds. The Navy was concerned about the pay's potential effects on the deployment of sailors and its high cost should Congress require the services to resume its payment. The Navy wanted to reconsider what would best fit its needs while staying within the original structure of the law. Because changes in ITEMPO require congressional approval, however, it could not be enacted quickly to counteract emerging retention problems resulting from excessive PERSTEMPO.

We summarize our recommended pay structures, their benefits, and costs in the next slides.



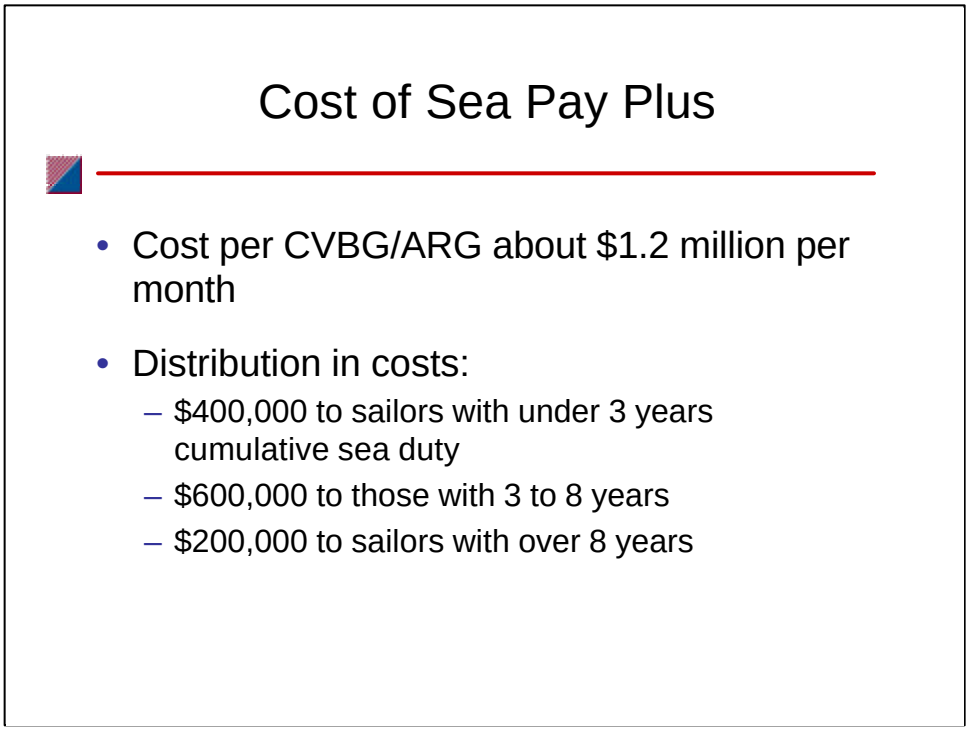
This slide explains the basic design of the Sea Pay Plus program. We proposed doubling monthly CSP rates once a sailor is deployed more than 6 months. The sailors would receive the additional pay at the time they incur the additional hardships.



Why did we structure Sea Pay Plus as we did? First, we used the current sea pay program because changes in rates up to the statutory maximum of $750 need only the Secretariat's approval. Consequently, Sea Pay Plus can be implemented quickly.

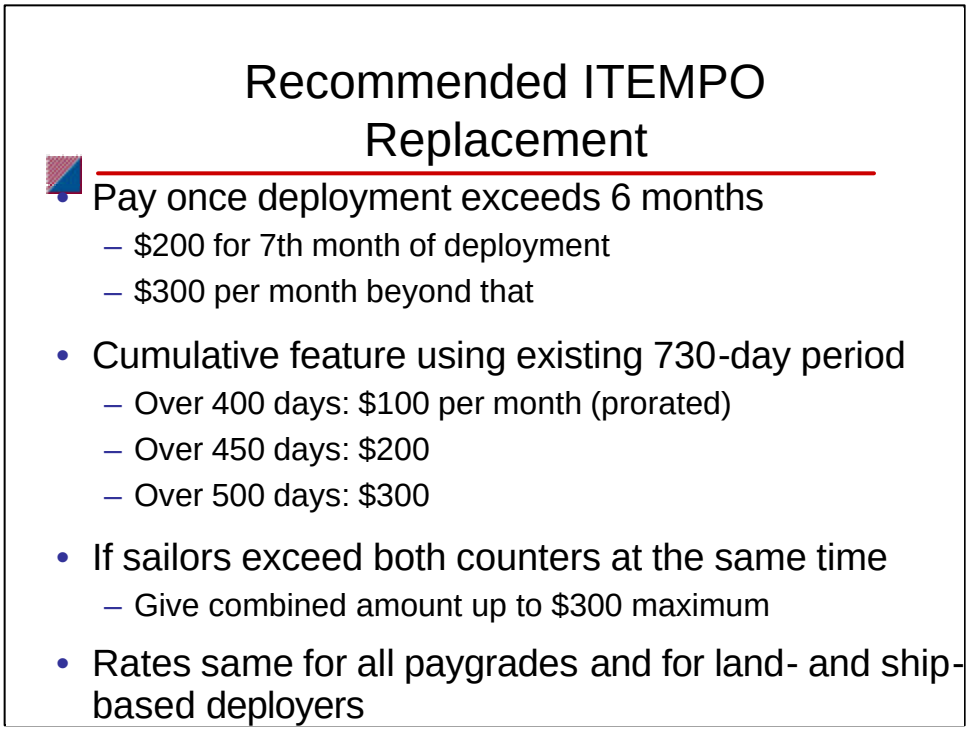
Second, Sea Pay Plus targets sailors at the first reenlistment points while providing some nominal compensation to all other sailors collecting sea pay. Sailors E-4 and above with 3 to 8 years of sea duty are likely to receive additional pay of $280 to $350 per month, which should offset retention effects from the lower end of the estimated range. The most junior sailors would receive smaller payments (typically $50 to $100 per month extra), as would the most senior sailors. E-5 sailors and above with over 8 years of sea duty would be constrained at the statutory maximum of $750 per month, which would equal $130 to $300 extra per month. Because of the maximums, about 10 percent of the battlegroup's sailors would receive less than double sea pay [5].

Should long deployments become the norm and the Navy experience larger decreases in retention, the Navy could also use SRBs to compensate sailors. Longer deployments would disparately affect sea-intensive ratings or skills, so SRBs, which could be targeted to those populations, would be an appropriate pay vehicle when used in combination with Sea Pay Plus. It would not, however, be as targeted and is not our recommended option.



We based our cost estimates on a pairing of a representative carrier battle group (CVBG) and an amphibious ready group (ARG). It included 10 ships: 1 carrier with airwings, 6 surface combatants, and 3 amphibious ships. We estimate that the enlisted crews of the representative CVBG/ARG total about 8,000 sailors. Sailors with under 3 years of cumulative sea duty make up 65 percent of the total deployed battle group force; sailors with 3 to 8 years constitute an additional 25 percent.

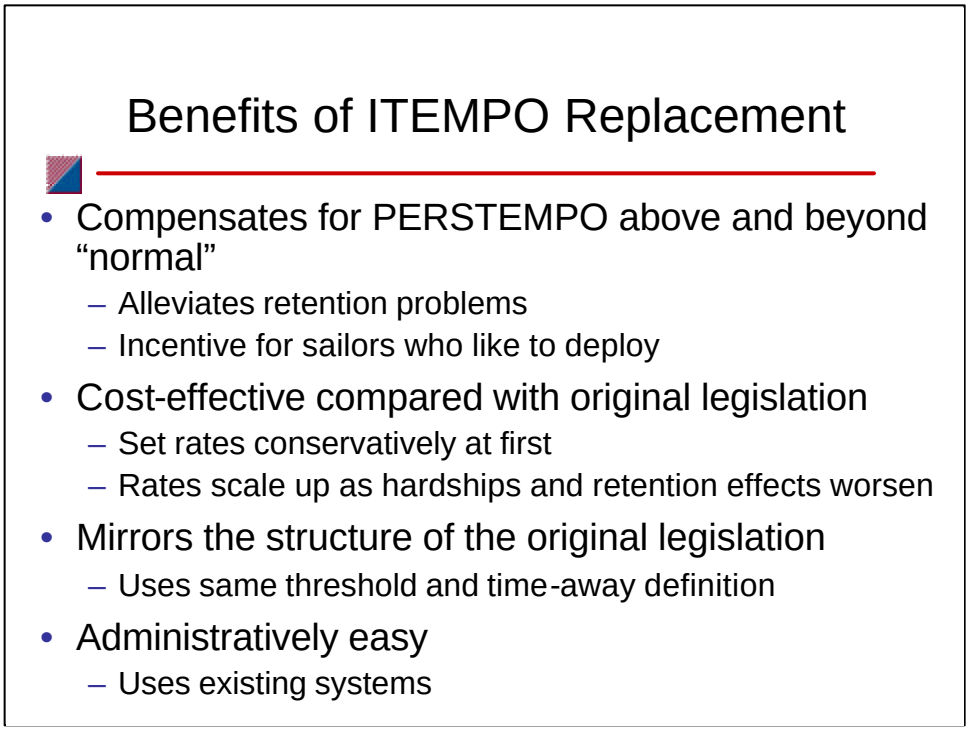
By doubling sea pay, although all sailors earn additional pay, the total cost is less than other options we considered. The bulk of the sailors are very junior and would earn little additional sea pay because they have accumulated little time on sea duty. Senior sailors with over 8 years of cumulative sea duty (representing about 10 percent of the crew) also earn relatively less in additional compensation than the targeted groups of sailors—sailors close to their first or second reenlistments. Consequently, almost one-half of the pay accrues to the targeted groups. In comparison, an across-the-board $275-per-month increase would cost the Navy $2.1 million per additional month a CVBG/ARG is deployed in excess of 6 months, yet we expect it would yield only nominal improvements in retention above the recommended plan. If the Navy's goal, however, is to compensate all sailors similarly for hardships when time away exceeds policy guidelines (i.e., use pay to do more than alleviate retention problems), it should consider pursuing such an across-the-board pay.



On this slide, we provide details of the ITEMPO replacement we recommended to the Navy. We recommended keeping much of the original structure and reporting systems, including the existing definition of time away. We did, however, propose several significant changes from the original ITEMPO legislation. First, we added a new feature—compensation for continuous time away. Second, we lowered the pay rates considerably. Finally, we added new time-away thresholds and scaled the rates up as sailors reach each threshold.

As with Sea Pay Plus, sailors would receive the ITEMPO pay when they are enduring additional hardships from high PERSTEMPO. If Congress were to replace the current ITEMPO legislation with this, or a similar, alternative, we envision that the revised ITEMPO would supersede Sea Pay Plus because it more comprehensively compensates sailors for excessive PERSTEMPO.

Because the services differ in their expectations of time away from home, we recommended that the services have the authority to set the pay thresholds, if not the pay rates.



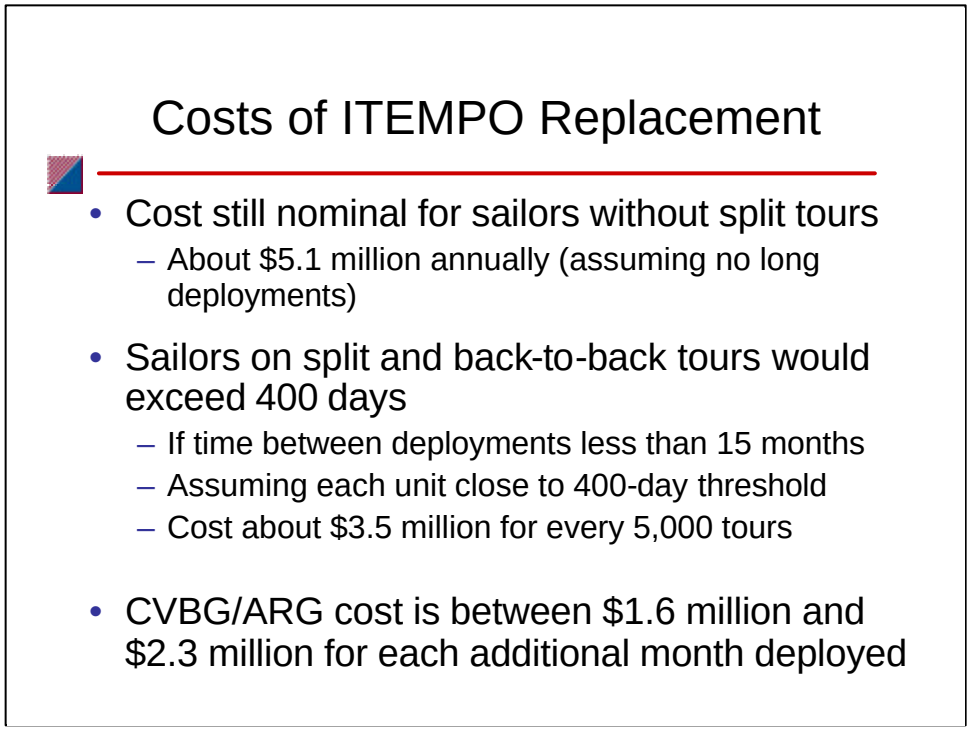
Because the intent of the ITEMPO replacement pay is to compensate sailors for tempo above and beyond normal, we determined when the Navy might consider sailors' days away as excessive. Based on a typical schedule of 6 months deployed followed by 16 months with 28 days away for every quarter, normal PERSTEMPO is exceeded at about the 400-day threshold. We, therefore, recommend that a nominal rate of $100 per month be introduced at 400 days. The Navy, however, does not break its PERSTEMPO policy until sailors exceed about 450 days away. This assumes a cycle of 6-month deployments followed by 12 months in port and a maximum of 50 percent time away over each deployment cycle. At 450 days, we suggest that the pay increase enough to compensate sailors for a small retention decline. Another increase would occur at 500 days. Structured this way, the ITEMPO replacement provides higher benefits to sailors as PERSTEMPO worsens—when retention is likely to deteriorate. This graduated structure is similar to sea pay, which increases as more of a sailor's career is spent on sea duty.

One benefit of this overhaul of the ITEMPO legislation is that, per recipient, it will cost less than the initial ITEMPO pay. We recommend substantially lower pay rates than the original legislation, which mandated $100 per day for exceeding the 400-day threshold of days away. As a result, the new pay is no longer punitive to the Navy. Instead, the pay rates should be just sufficient to compensate sailors for the additional hardships of extra time away from home. If the costs to alleviating the retention consequences are more than we estimate, however, having statutory maximums of $500 or more would allow the Navy flexibility in setting more appropriate rates.

One feature we've added is that sailors serving on extra-long continuous deployments would be compensated for their additional hardships. Many sailors who remain on extra-long deployments would not qualify for the existing ITEMPO pay, if they had lengthy turnaround times. As shown earlier, however, not only time away but also long deployments can affect retention adversely. Consequently, the proposed ITEMPO structure more completely compensates sailors for PERSTEMPO beyond the norm.

It would be more cost-effective to target retention among the middle and senior grades; however, because the objective of the pay is to compensate sailors for time away above and beyond normal, we felt that rates of pay regardless of paygrade would be appropriate and administratively easier. It is also similar to the original ITEMPO pay.

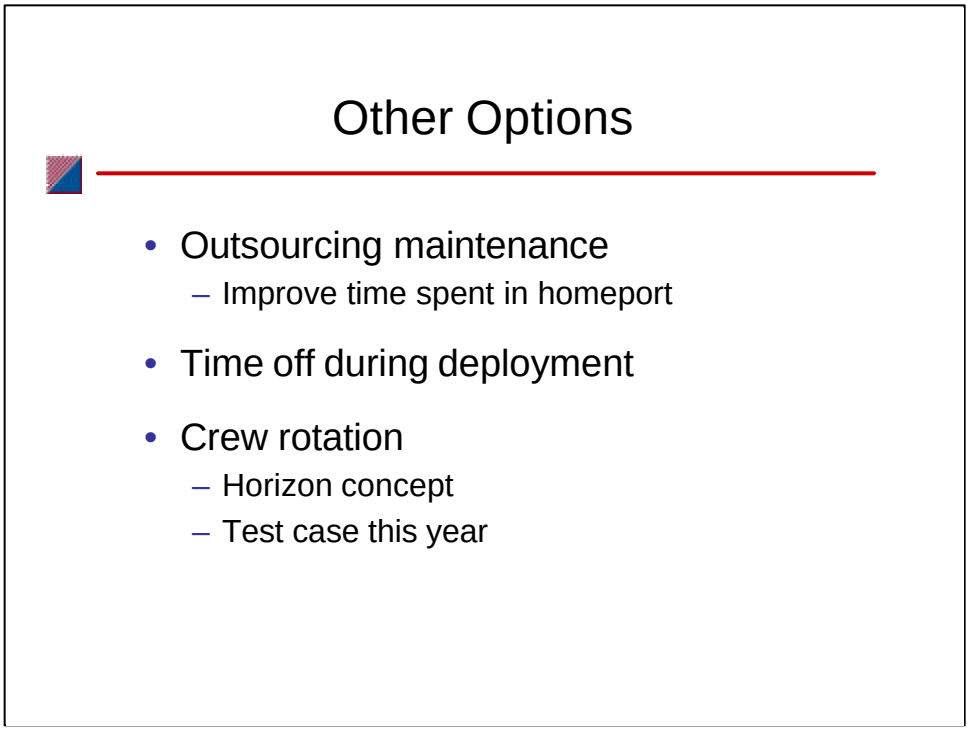
Many features of the replacement pay build on the existing structure, definitions, and system (e.g., the definition of time away is unchanged). We do this partly to keep the replacement pay administratively easy. To the degree that the original legislation was intended to compensate servicemembers for excessive time away, the proposed replacement pay does so, but at less cost. The replacement pay, however, would no longer curtail the services from allowing servicemembers' time away to exceed the threshold, as needed.



Based on the ITEMPO model developed for N130 by RCI, we expect, in any year, about 1,200,000 sailor work-days to exceed the 400-day threshold, one-third of which would also surpass the 450-day threshold. The associated costs total $5.1 million annually. The cost estimates reflect the following recent policy changes: (1) the Seabees' new rotational scheme of 6 months away and 10 home, and (2) the official homeport changes for ships in an availability greater than 12 months and away from their original homeport. Both actions reduce the calculation of sailors' time away. For instance, very few Seabees will exceed the 400-day threshold. About half of the pay, however, will go to sailors who exceed ITEMPO thresholds because of out-of-homeport ship maintenances of less than 12 months.

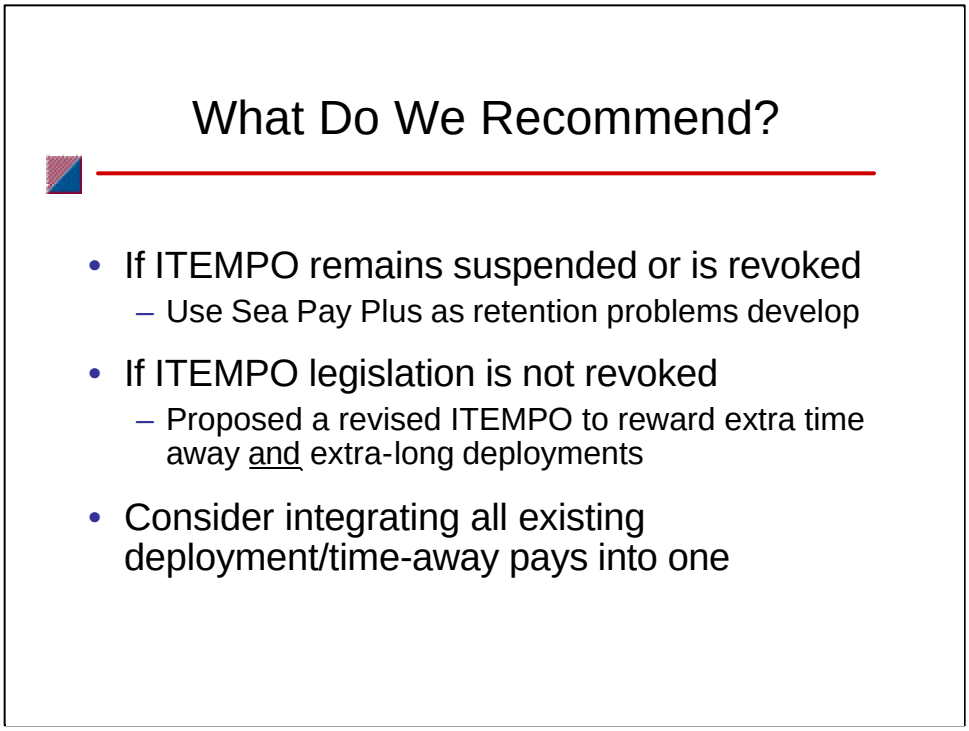
Larger costs will accrue to sailors on split or back-to-back sea tours. They will be paid ITEMPO relatively more frequently than other sailors on sea duty because they experience shorter turnarounds and accumulate more time away than the norm. In calculating the costs, we've assumed that the time between deployments is 9 months. Based on 5,000 sailors beginning split or back-to-back tours in a year (which is roughly what we see historically), these sailors would be entitled to about $3.5 million in extra pay.

Finally, compensating sailors for 7-month deployments at $200 per month across the board would cost the Navy about $1.6 million per month for each CVBG/ARG. The cost rises to $2.3 million after the seventh month when sailors earn $300 per month. Unlike Sea Pay Plus, which caps some sailors because of statutory CSP maximums, no sailor would receive less than the $200 or $300 level of pay.



Because previous CNA studies have found that what sailors do during their time in homeport and on deployment is important to retention, it may be worth pursuing other, non-pay-related means to increase sailor satisfaction and retention. For example, maintenance activities harm reenlistment almost as much as overly long deployments do. By freeing sailors who have just deployed for over 6 months from maintenance activities, the Navy could keep retention constant. In addition, by outsourcing those functions, the Navy may be able to save money [6, 7].

Other options involve changing the typical deployment. One alternative is to provide time off and transportation for sailors and their families to meet during the deployment while maintaining forward presence. Another way to keep or improve forward presence is through crew swaps while the ship is deployed. The Navy is testing crew rotation schemes that maintain forward presence for a ship or battle group for 18 months, yet conform to 6-month deployment rules for individual sailors. CNA is evaluating sailors' experiences on Sea Swap (e.g., workload and satisfaction) and comparing their retention against other deployed ships.



In the near term, if the Navy regularly breaks the 6-month deployment policy, Sea Pay Plus should be an effective means to ameliorate any retention consequences. In the longer term, if ITEMPO is not revoked completely or permanently suspended, the Navy should push for a revision to the legislation that compensates sailors for PERSTEMPO hardships, such as those we have outlined here and in earlier briefings. The revisions we proposed would allow the Navy to compensate sailors on more dimensions of PERSTEMPO than Sea Pay Plus and at a more reasonable cost than the original ITEMPO legislation. Should the ITEMPO replacement become law, Sea Pay Plus would no longer be necessary.

In addition, several pays are available that compensate sailors for hardships when they are away from home, such as Family Separation Allowance and Hardship Location Pay. We recommend that a more integrated approach to compensating sailors for time away from home should be initiated to optimize the amount and timing of pays that sailors receive when they are not in homeport. Assignment Incentive Pay may be one means to simplify the system of pays and ultimately reduce the Navy's costs [8].

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[8] Heidi L. W. Golding, Eric W. Christensen, and Diana S. Lien. *Transforming the Assignment System: Will Incentives Reduce Critical Shortages?* Dec 2002 (CNA Research Memorandum D0007147.A2)