

Improving Reenlistment Incentives and Processes: Analysis of the Perform-To-Serve Program

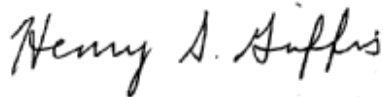
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A handwritten signature in black ink that reads "Henry S. Griffis". The signature is written in a cursive style with a large initial 'H' and 'G'.

Henry S. Griffis, Director
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Executive summary

Background

The Navy would like to control its reenlistments using a timely and responsive process that allows it to meet endstrength, that encourages qualified Sailors to lateral into undermanned skills, and that retains the highest quality Sailors while avoiding negatively affecting the tone of the Navy's reenlistment environment. In March 2003, the Navy implemented its Perform-To-Serve (PTS) program as a first step toward achieving this goal. PTS is a centrally controlled, application-driven reenlistment system for Zone A Sailors. As part of a study aimed at improving the Navy's reenlistment policies and processes, the Director, Military Personnel Plans and Policy Division (N13) asked CNA to analyze the PTS program.

Approach

Our analysis of the PTS program centers on whether PTS is achieving its goals. The goals of PTS are to shape the force by moving Sailors from overmanned to undermanned ratings and to serve as a quality screen by controlling the opportunity to reenlist.

To analyze whether PTS is shaping the force, we examine how the number of Sailors in overmanned ratings has changed since PTS was implemented. If PTS is leveling manning, we would expect to see fewer Sailors in overmanned ratings today than there were in March 2003.

The PTS system competitively ranks Sailors who apply to reenlist in a given month with other Sailors in their rating/enlistment management community who also applied that month. We examine average speeds of promotion to determine whether this monthly ranking is selecting the highest quality Sailors for reenlistment.

Recommendations

To improve the reenlistment process for Zone A Sailors, we recommend that the Navy improve the PTS system. We believe that the Navy can enhance PTS by connecting the PTS system to other Navy programs or processes, such as the selected reenlistment bonus process or Fleet RIDE. In addition, the current definition of quality in the PTS system is too complex. We recommend that the Navy change its definition of quality. For a quality measure to provide incentives, Sailors need to be able to determine where they fall in the ranking. Finally, the PTS process relies on three broadly defined manning categories: undermanned, level-manned, and overmanned. We believe that these manning level categories are too broad and should be reexamined.

Since we began this study, an interest in expanding the PTS system to Zones B and C has developed. We believe that a PTS-like system at the Zone B reenlistment point could be useful, but an improved quality measure is essential. For Zone C, however, we believe that a PTS system would equate to involuntary separations given the nearness of retirement. Therefore, we recommend the use of Voluntary Separation Pay with a quality cut for Zone C.

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Outline



- Background
 - How does PTS work?
 - Summary of data sources
 - Summary of PTS outcomes
 - Is PTS achieving its goals?
 - Conclusions
 - Recommendations

As part of a larger effort to analyze the current reenlistment policies and processes, the Director, Military Personnel Plans and Policy Division (N13) asked CNA to analyze the Navy's Perform-To-Serve (PTS) reenlistment program. This annotated briefing summarizes our assessment of the PTS program. This completes task 1 of the Improving Reenlistment Incentives and Processes study.

Perform To Serve



- PTS is a centrally controlled, application-driven reenlistment system
 - Applies only to Zone A Sailors who are recommended for retention
- Goals
 - To shape the force (level manning) by moving Sailors from overmanned to undermanned ratings
 - Manning levels are measured by career reenlistment objectives (CREO) categories
 - CREO 1 = undermanned
 - CREO 2 = manned at appropriate level
 - CREO 3 = overmanned
 - To serve as a quality screen for reenlistments

Implemented in March 2003, PTS is a centrally controlled, application-driven reenlistment system. Currently, PTS applies to all Zone A Sailors who are recommended for retention by their Commanding Officers (COs).¹

The goals of PTS are to shape the force by moving Sailors from overmanned to undermanned ratings and to manage the quality of those who reenlist by controlling the authority for reenlistment. That is, based on the needs of the Navy, only the best Sailors are approved for reenlistment into select ratings.

The manning level of a rating is indicated by its CREO category. CREO 1 ratings are undermanned, CREO 2 ratings are manned at appropriate levels, and CREO 3 ratings are overmanned.

¹ When PTS was implemented in March 2003, only those Zone A Sailors in CREO 3 ratings had to apply to reenlist. In December 2003, the program was expanded to include those Sailors in CREO 2 ratings. Currently, *all* Zone A Sailors with an end of active obligated service (EAOS) of February 2006 or beyond must apply to reenlist regardless of their intentions or desires.

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The PTS application collects



- Reenlistment option choices
 - Reenlist-in-rate
 - Reenlist-in-rate or convert
 - Convert only
- Career information
 - Current paygrade
 - EAOS
 - Whether the applicant
 - Has the CO's recommendation for advancement,
 - Was selected for advancement to the next paygrade,
 - Passed his/her last advancement exam but was not advanced,
 - Holds a critical NEC,
 - Is required to reenlist at greater than 12 months prior to hard EAOS due to obligated service requirements
 - Promotion recommendation from the last two regular evaluations (e.g., early promote (EP), must promote (MP), or promotable (P))

The PTS process begins with a Sailor² submitting his or her application for reenlistment up to 12 months before the expiration of active obligated service (EAOS).³

The application collects two types of information: the Sailor's reenlistment option choice and specifics on the Sailor's career. In their applications, Sailors choose one of three reenlistment options based on their desires and qualifications. Sailors may opt to apply for reenlistment-in-rate, reenlistment-in-rate or convert, or convert only. The processing of a Sailor's application varies depending on the Sailor's choice. We describe this process in more detail on the next slide. The majority of the information collected about a Sailor's career is used in an algorithm that serves as the quality cut in the reenlistment process.⁴

² PTS applications are actually submitted to Navy Personnel Command by an authorized command representative—usually the Command Career Counselor. PTS applications are submitted in Excel spreadsheet format either on the web or via e-mail.

³ Some Sailors may submit applications up to 15 months before their EAOS. See the appendix for more information on the application timeline.

⁴ The slide provides examples of the types of career information collected and is not meant to be exhaustive.

Application processing depends on reenlistment option choices



- Reenlistment-in-rate
 - Sailor is considered for reenlistment in only his/her current rating
- Reenlistment-in-rate or convert
 - Sailor is first considered for reenlistment in current rating, then for conversion to a new rating if current rating is unavailable
- Convert only
 - Sailor is considered only for conversion to a new rating

Reenlistment-in-rate. Sailors who choose this option signal that they want to reenlist in their current ratings only. The Sailor is considered *only* for reenlistment-in-rate.

Reenlistment-in-rate or convert. Sailors who choose this option wish to reenlist in their current ratings but are willing to convert to new CREO 1 or CREO 2 ratings. The Sailor's application is first considered for reenlistment-in-rate. If the Sailor is not approved to reenlist-in-rate, he or she is considered for conversion (Sailors may list up to three choices in their applications).⁵

Convert only. Sailors who choose this option wish to convert to new ratings. In this case, the Sailor is *not* considered for reenlistment in his or her current rate. The Sailor is considered only for conversion to one of the three choices listed in the application.

⁵ COs should verify that an applicant desiring conversion meets all the eligibility requirements for conversion choices before submitting the application.

Expanding on the opportunity to convert



- Authorized conversion quotas
 - Conversion is only a possibility if quota is available (even for CREO 1 ratings)
- Tentative approval
 - Enlisted community managers verify that the Sailor qualifies for the conversion rating *after* PTS process is complete

Regardless of a rating's CREO category, tentative approvals for conversion into a given rating are possible only if a quota is available for that rating. Authorized conversion quotas are posted monthly on the PTS website. Quotas are assigned based on input from the respective enlisted community managers. In any given month, conversion quotas may be available in CREO 1, CREO 2, and/or CREO 3 ratings.

If tentative approval for conversion into a rating is given, the receiving enlisted community manager verifies that the Sailor qualifies for the rating before he or she can reenlist. COs are asked to verify that Sailors qualify for conversion choices before submitting applications so that unqualified Sailors don't take quotas away from qualified Sailors. Sailors close to their EAOS may lose the opportunity to reenlist if they apply for conversion into ratings for which they are not qualified. In addition, a Sailor must successfully complete all required training for a new rating before he or she can reenlist.

Defining quality: The stacking algorithm



- Compares Sailors in the *same* rating/enlisted management community in a *given month*
 - Sailor must have CO's recommendation for retention to enter algorithm
- Sailors are racked and stacked according to the following criteria:
 1. Sailors recommended for advancement by COs
 2. Sailors in the highest paygrades
 3. Sailors selected for advancement but not yet advanced (frocked)
 4. Sailors who passed their last advancement exam but were not advanced (PNA'd)
 5. Sailors who hold critical NECs
 6. Sailors' last two regular promotion recommendations

After submitting an application, the Sailor enters the stacking algorithm, which defines quality. Sailors are “racked and stacked” (i.e., ranked competitively) in the month in which they apply based on the listed criteria.⁶ That is, applicants are compared with other applicants within the same rating and enlisted management community (EMC) in a given month.

EMCs consist of a number of ratings, which fall under one community manager (i.e., Aviation EMC consists of the ABE, ABF, ABH, AC, AD, AE, AG, AM, AME, AO, AS, AT, AW, AZ, and PR ratings). However, some ratings fall into multiple EMCs. For the purposes of PTS, Sailors are compared with other Sailors *in the same rating within the same EMC*.

⁶ See the appendix for a diagram of the stacking algorithm.

Possible outcomes under PTS



- Approved to reenlist in rating (INRATE)
- Tentatively approved to reenlist in another, specified rating (CONVERT)
- Reapply – those executing long-term extensions (REAPPLY)
- No decision this cycle, rolled over to next month (ROLLOVER)
- Not allowed to reenlist (REJECTED)
- GENDETs within 6 months to EAOS are notified of reapply status (GENDET REAPPLY)

After Sailors enter the stacking algorithm, six outcomes are possible. Applicants may be approved for reenlistment-in-rate. If an applicant is not approved for reenlistment-in-rate but is willing to convert, or if an applicant selected “convert-only,” he or she may receive tentative approval for conversion. If no quotas are available for any of the Sailor’s conversion choices, two outcomes are possible.

(1) If the Sailor has an unexecuted extension greater than 12 months beyond the EAOS, the Sailor is told to execute his or her extension and to reapply within 12 months of their soft EAOS.

(2) If the Sailor does not have an unexecuted extension, the Sailor’s application is rolled over for review with the next month’s set of applications.

Applications are considered until the Sailor is either approved for reenlistment-in-rate or conversion or until 6 months before EAOS. Once the Sailor is within 6 months of EAOS and has yet to be chosen for reenlistment-in-rate or conversion, the Sailor is told to separate at EAOS (i.e., the Sailor is not allowed to reenlist).

The process is slightly different for General Apprentices (GENDETs) in the Mxxx EMC. GENDETs within 6 months of EAOS are notified of GENDET reapply status, which gives the command the option of extending the Sailor for 12 months to provide opportunity to strike for a rating.⁷ GENDETs who don’t receive approval to convert through PTS must separate at their EAOS.

⁷ The administrative message that publishes CREO categories also publishes the Rating Entry for General Apprentices (REGA). The REGA list states whether a rating is open or closed, whether A-school is required, or whether approval is required. GENDETs must have qualifying ASVAB line scores for open ratings.

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Data sources



- PTS data from Navy Personnel Command
 - Individual-level data from March 2003 through March 2006
 - Select variables from PTS application
 - PTS outcome (i.e., INRATE, CONVERT, etc.)
- Enlisted Master Record
 - Career information on Sailors
- Navy Administrative Messages
 - Publish CREO categories for regular USN and for FTS personnel
 - Six CREO NAVADMIN dates: February 2003, April 2003, December 2003, December 2004, July 2005, January 2006
- Authorized Conversion Quotas from NPC
 - Rating-level data from September 2004 through March 2006
 - Quotas available per rating per month
 - Quotas taken per rating per month

We base our analysis on data from four sources. First, we received the universe of PTS applications from Navy Personnel Command (NPC). That is, we have individual-level data on Sailors who applied for reenlistment between March 2003 and March 2006. The data include information on the Sailor's career collected in application, such as paygrade, EAOS, rating, and EMC. We also know the applicant's reenlistment option choice and whether the applicant chose convert only. Finally, we know the outcome for each applicant (whether a Sailor was approved to reenlist-in-rate, approved to convert, etc.). See the appendix for a complete list of variables.

To this data set, we added variables of interest from the Enlisted Master Record (EMR). In particular, from the EMR, we merge in the Sailor's Armed Forces Qualification Test (AFQT) score, education level, time in grade at various promotion points, and reenlistment decision.

The analysis of manning levels is based data in Navy Administrative Messages (NAVADMINs) that publish the CREO categories for each rating. CREO categories vary by paygrade; E1s through E4s, E5s, and E6s have separate CREO categories. Full-time support (FTS) personnel also have separate CREO categories. Since PTS began, six NAVADMINs have published updates to CREO categories.

Finally, we use authorized conversion quota data from NPC. The authorized conversion quota is the maximum number of Sailors in a given month that may convert into a given rating. These quotas are set monthly by enlisted community managers.

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Summary of PTS outcomes March 2003 to March 2006

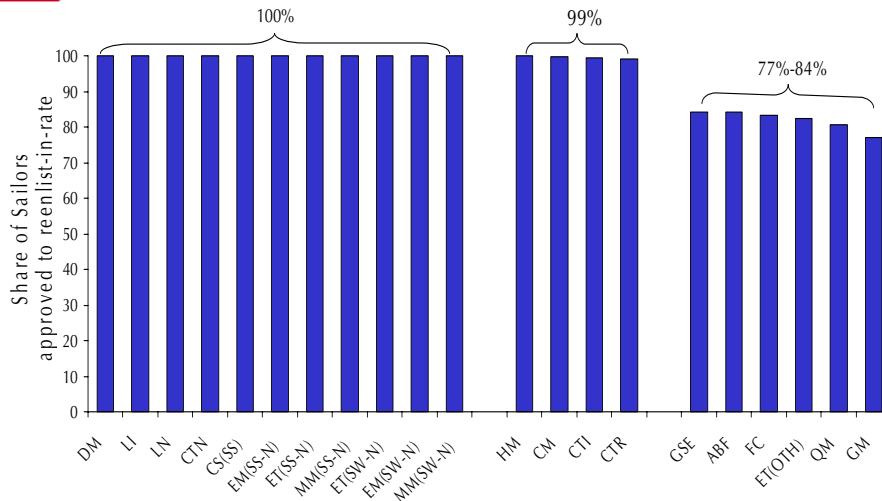


- 93,157 applications submitted
 - 79,291 approved to reenlist-in-rate: 85.1%
 - 5,824 tentatively approved to convert to a new rating: 6.3%
 - 3,568 rejected for reenlistment: 3.8%
 - 2,050 rolled over (in March '06): 2.2%
 - 1,356 GENDETs told to reapply: 1.5%
 - 1,068 told to reapply: 1.1%

In the first 3 years, the PTS program processed over 93,000 applications. Over 85 percent of applicants received approval to reenlist-in-rate, 6 percent had tentative approval to reenlist by converting to a new rating, and less than 4 percent were forced to separate.

See the appendix for outcomes by rating/ECM.

Most common ratings for in-rate approval to reenlist*

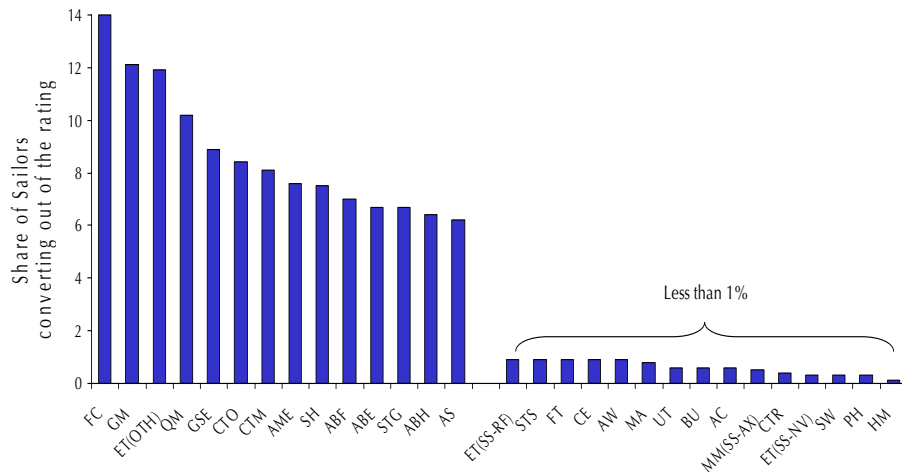


* Excludes GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs).

This slide shows the ratings with the highest and lowest proportion of Sailors allowed to reenlist-in-rate. We exclude Sailors with Reapply, GENDET Reapply, and Rollover outcomes since none of these are “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month. Sailors are approved to reenlist-in-rate 100 percent of the time in 11 ratings. This is not that surprising since 6 of the 11 ratings are in the nuclear field. More surprising, however, is that there are only 6 ratings in which Sailors are approved to reenlist-in-rate less than 85 percent of the time.

The slide excludes GENDETs in the Mxxx EMC since they are not allowed to reenlist-in-rate.

Which ratings are Sailors* converting out of?

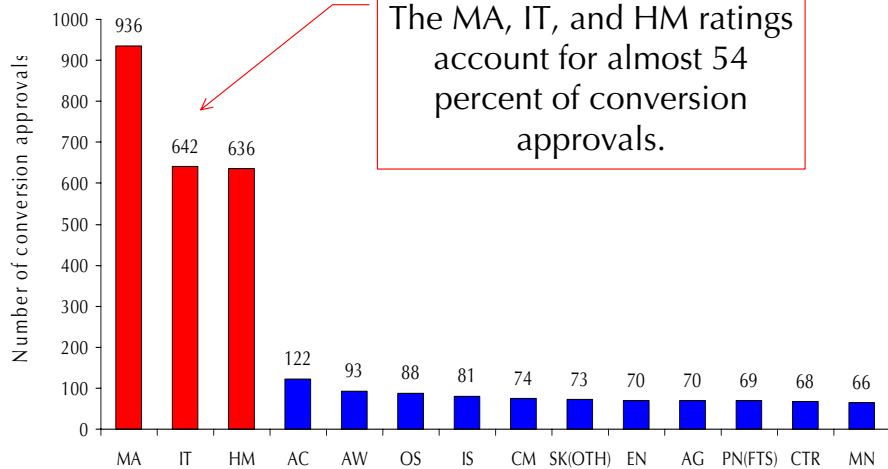


* Excludes GENDETs in the Mxxx EMC. We analyze the conversion patterns of these GENDETs separately. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs).

This slide shows the ratings with the highest and lowest proportion of Sailors approved to convert out of their rating. In almost all ratings, the PTS outcome is convert for less than 15 percent of the applicants. There are only 16 ratings in which the share of PTS applicants approved to convert is greater than 5 percent.

Similarly, there are 15 ratings in which the share of PTS applicants approved to convert is less than 1 percent. We exclude those ratings with no Sailors converting out of the rating. These ratings include the 11 ratings from the previous slide, which had a 100 percent reenlist-in-rate approval rate, and the following four ratings: YN(SS), MU, CTI, and CM.

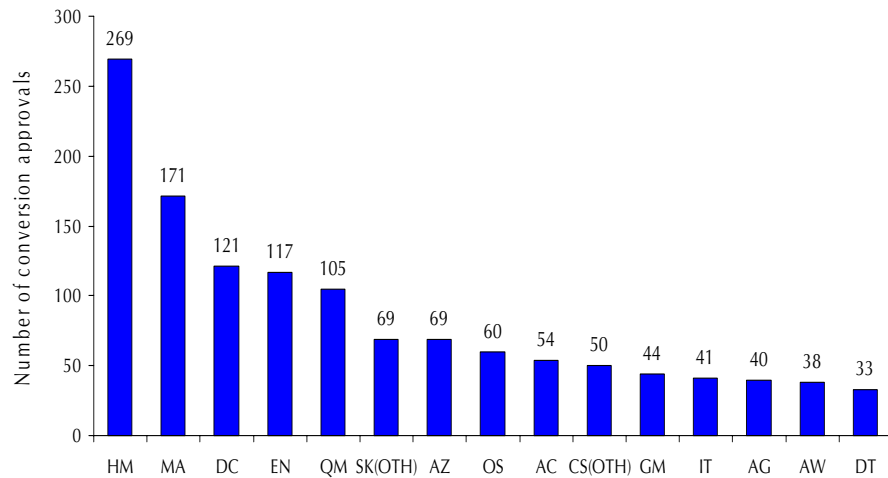
Which ratings are Sailors* converting into?



* Excludes GENDETs in the Mxxx EMC. We analyze the conversion patterns of these GENDETs separately. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs).

Fourteen ratings received 75 percent of the Sailors (excluding GENDETs) with tentative approval to convert. MA, IT, and HM account for over 50 percent of all conversions.

Which ratings are GENDETs converting into?



Fourteen ratings received 73 percent of the GENDETs with tentative approval to convert and reenlist. The conversion pattern for GENDETs is similar to that of rated Sailors in that we see a large percentage of conversions into the HM and MA ratings.

This slide summarizes conversion approvals from the first 3 years of PTS. Some of the ratings appearing on the slide have merged (or are in the process of being merged), such as HM & DT and OS & QM.

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How to measure whether PTS is achieving its goals



- Measures of success in shaping the force
 - Are ratings more level-manned now than when PTS began?
 - Is the number of CREO 2 ratings increasing and the number of CREO 1 and CREO 3 ratings decreasing over time?
 - Is the number of Sailors in CREO 1, CREO 2, or CREO 3 ratings falling over time?
 - Are in-rate approvals predominately in CREO 1 and 2 ratings?
 - Are conversion approvals overwhelmingly from CREO 3 ratings?
 - Are the CREO 1 and CREO 2 Sailors actually reenlisting?
- Evaluating the quality screen for reenlistments
 - Are the right people being chosen to stay/leave?
 - Are those with the highest AFQT scores being chosen to stay?
 - Are those who are promoted the fastest being chosen to stay?
 - Are the highest quality Sailors actually reenlisting?

Recall that the two goals of PTS are to shape the force and to serve as a quality screen for reenlistments. The question becomes how to measure whether PTS is achieving these goals.

To determine if PTS is successful at shaping the force, we need to examine whether ratings are more level-manned now than when PTS was implemented. In other words, are there more CREO 2 (level-manned) ratings now than there were in March 2003? The next slide analyzes CREO NAVADMINS to answer this question.

What about the number of Sailors in CREO 2 ratings? If we examine just applicants, the share of Sailors in CREO 3 ratings must decrease because CREO 1 and CREO 2 Sailors *didn't have to apply* in all the months considered in the analysis. Because Sailors in CREO 3 ratings are the majority of the Sailors in the system, they are also likely to dominate the in-rate approvals and conversion approvals. Therefore, we need to examine the share of all Sailors in CREO 2 ratings across the analysis period.

However, in terms of level manning, whether the Sailors in CREO 1 and CREO 2 ratings are reenlisting is as important as the PTS outcome. This is testable, in theory. However, because Sailors in CREO 1 and CREO 2 ratings have only had to apply in recent months, this is only testable for the most recent months. Sailors applying in the most recent months have not yet reached EAOS, and so we cannot determine yet whether these Sailors are actually reenlisting.

To evaluate whether the quality screen is successful, we need to examine whether the highest quality Sailors, as measured by AFQT scores or promotion speeds, are being approved to reenlist and if they actually do.

Is PTS achieving its goal to shape the force (i.e., level manning)?



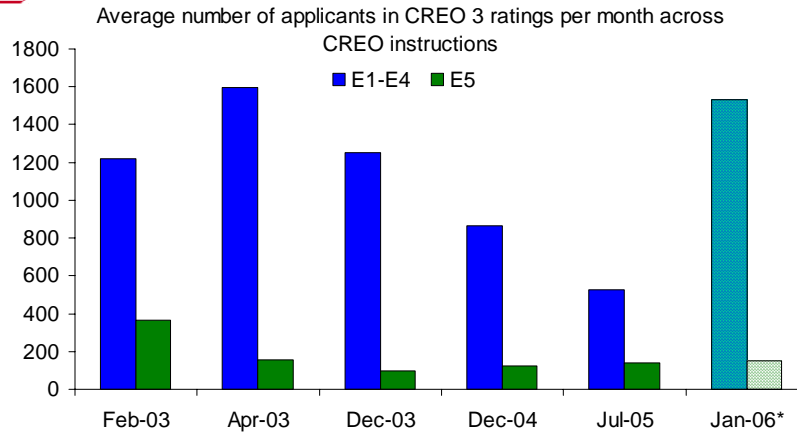
- Has the number of ratings manned at desired levels (CREO 2) increased?

CREO Instruction	Number of CREO 2 ratings	
	E1-E4	E5
February 2003	26	70
April 2003	26	66
December 2003	26	74
December 2004	32	43
July 2005	49	43
January 2006*	30	36

* CREO category determination changed for this instruction.

This slide shows preliminary evidence that the number of CREO 2 ratings for E1 to E4 Sailors has increased since PTS began. The evidence is more mixed for E5 Sailors. However, rating mergers, new ratings, and rating disestablishments make this an ambiguous measure because the overall number of ratings is not constant. Therefore, we examine the number of Sailors instead of the number of ratings.

Is PTS achieving its goal to shape the force?



➤ The number of applicants in CREO 3 ratings has fallen since program began.

* New CREO category determination policy.

The chart shows the average number of applicants in CREO 3 ratings per month.⁸ We took the total number of applicants in CREO 3 ratings during the time that a particular CREO NAVADMIN was effective and divided it by the number of months that the CREO NAVADMIN was effective.⁹

We highlight the averages for the January 2006 CREO NAVADMIN because the process by which CREO categories are determined changed between the July 2005 NAVADMIN and this NAVADMIN.

If PTS is achieving its goal to shape the force, we would expect over time to see fewer applicants from CREO 3 ratings. That is, a more level-manned force would consist of fewer Sailors in overmanned ratings. Disregarding the January 2006 CREO NAVADMIN, we do see that the number of CREO 3 applicants was falling. However, given the change in the CREO category determination process, comparing the average number of applicants from the January 2006 instruction with earlier instructions would not be an apples-to-apples comparison. We have to wait for future CREO instructions to verify that the number of applicants in CREO 3 ratings continues to fall.

⁸ We use CREO 3 ratings instead of CREO 2 ratings because only those Sailors in CREO 3 ratings had to submit PTS applications during the effective period for all six CREO NAVADMINs.

⁹ All but one CREO NAVADMIN contain the following statement: “For the purposes of PTS, changes to the CREO category of a rating become effective [ddmmyy].” The period of time that a CREO NAVADMIN was “effective” then, is the number of months between the date in this statement for that NAVADMIN and the date in this statement in the subsequent CREO NAVADMIN. For the April 2003 CREO NAVADMIN that didn’t contain such a statement, we assume that the changes became effective on 1 May 2003.

Authorized conversion quotas constrain conversion mechanism



- From September 2004 through March 2006, there were 5,712 authorized conversion quotas*
 - 2,410 conversions were “taken” during this 19-month period: 42.2% “take rate”
 - PTS applications for Sept. 2004 to March 2006: 49,101
 - 43 different ratings with a quota during time period
 - Average of 18 ratings per month with a quota**
 - 10 CREO 1 ratings (for E1s to E4s)
 - 7 CREO 2 ratings (for E1s to E4s)
 - 4 CREO 3 ratings (for E1s to E4s)
- During same period, for E1s to E4s, on average, there were 11 additional CREO 1 ratings *without* quota

* Historic data on authorized conversion quotas were not available before September 2004.

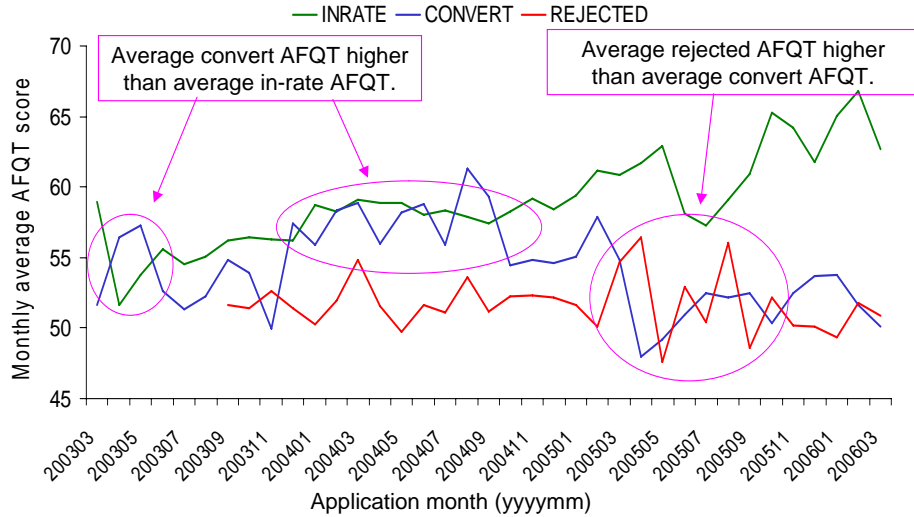
** Four different CREO instructions were effective at some point from September 2004 to March 2006.

For a Sailor to get approval to convert to a new rating, there must be an authorized conversion quota available. From September 2004 through March 2006, more than 5,500 conversion quotas were available, but less than half of them were used. Recall that these conversion quotas and data on quotas taken are separate from our PTS data. During this same time period, PTS data show that more than 49,000 applications were submitted. About 2,200 of these resulted in a tentative approval to convert. Of these nearly 2,200, less than 29 percent of those who reached a decision point actually convert to a new rating and reenlist.

The conversion quotas were spread across 43 different ratings. On average, a rating on the conversion quota list had a quota in 8 out of 19 months. However, only 26 of the ratings had a quota in at least 6 months of the 19-month timeframe. Only 8 ratings had quotas in at least 15 of the 19 months.

The take-away from this slide is that no conversion quotas are available for a significant number of CREO 1 ratings—mostly nuclear or special warfare ratings. Given that these ratings will remain undermanned if there are never quotas available in them, the conversion mechanism in PTS is underused.

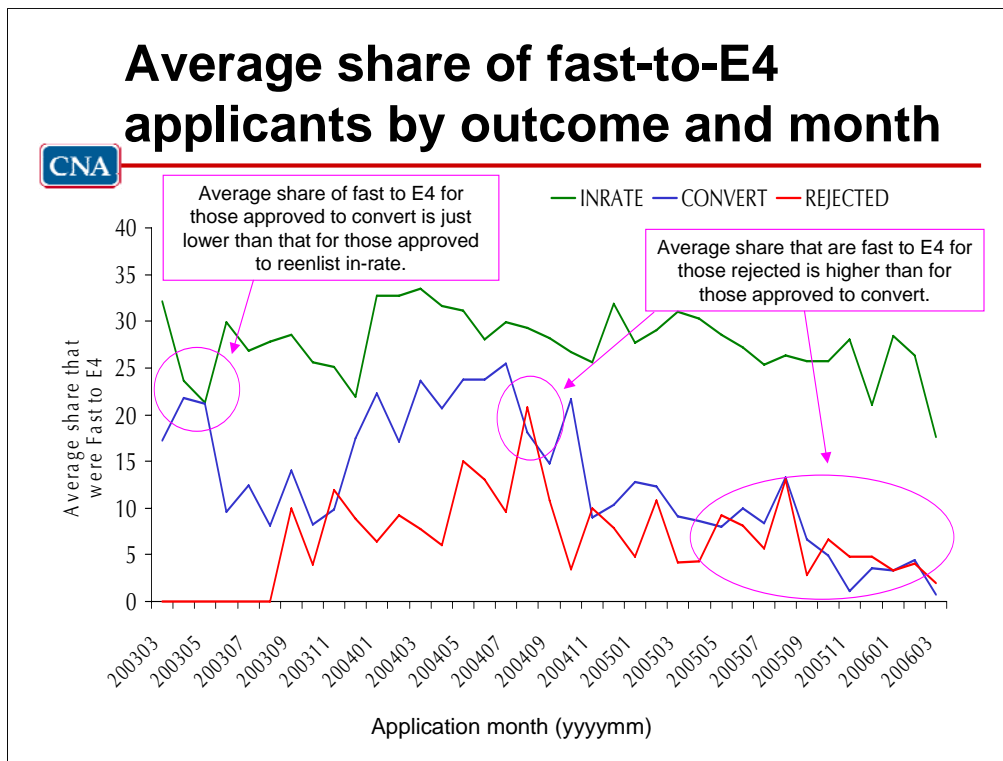
Monthly racking and stacking can lead to an inconsistent quality cut



This graph provides some evidence that the current stacking algorithm may result in an inconsistent quality cut. The chart shows a significant number of months in which the average AFQT score of those approved to convert is higher than for those approved to reenlist-in-rate. This is not necessarily troubling since both of these groups are allowed to remain in the Navy. More troubling, however, is the fact that there are also a number of months in which the average AFQT score of those rejected for reenlistment is higher than for those approved to convert and remain in the Navy.¹⁰

AFQT scores, however, measure quality at time of enlistment and vary widely across EMCs and ratings. For this reason, we turn to a measure of “fast promoters,” which is specific to EMCs.

¹⁰ We exclude Sailors with Reapply, GENDET Reapply, and Rollover outcomes since none of these are “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.



We define fast promoters as those Sailors who were in the top 25th percentile in months to E4 in their EMC (henceforth referred to as “fast to E4”).¹¹ That is, we consider the group of Sailors who accessed in the same 3-year cohort and were ultimately rated in a particular EMC. Next, we calculate the median time to E4 for all Sailors promoted to E4 in FY2001. From each accession cohort, we exclude Sailors who left the Navy before this median time to E4 in order to retain only those who survived long enough to have a reasonable chance of being promoted to E4. Then, for the rest of each cohort, we calculate the number of months it took the fastest 25 percent to be promoted to E4. Those Sailors who made E4 in fewer months than the fastest 25 percent of their cohort are considered fast to E4. Therefore, fast to E4 measures quality within EMCs, while controlling for fiscal year phenomena, and accounts for job performance since the time of enlistment. We caution that fast to E4 is just one measure of quality; however, lacking information on where Sailors actually fall in the rack and stack, we use this as a proxy.

There are a number of months in which the average share of those approved to convert who were fast to E4 is lower than for those rejected for reenlistment.¹² Again, this indicates that the stacking algorithm might be providing an inconsistent quality cut. These monthly averages, however, do not account for the fact that Sailors may choose “convert only.”

¹¹ Our fast-to-E4 measure excludes FTS Sailors and Sailors with periods of broken service.

¹² We exclude Sailors with Reapply, GENDET Reapply, and Rollover outcomes since none of these are “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

Is PTS achieving its goal to serve as a quality screen for reenlistments?



- Share of Sailors in each group who were fast to E4

Group*	All applicants	Applicants who said "NO" to Convert only?	Applicants who said "YES" to Convert only?
Approved to reenlist-in-rate	27.5	28.7**	n/a
Approved to convert	13.7	5.1	21.5
Rejected for reenlistment	7.8	5.9	19.4

* Groups are distinct so that shares should not sum to 100.

** The share that is approved to reenlist-in-rate overall is not equal to "convert-only=no" share due to missing values in the convert-only variable.

- Differences in means between those approve to reenlist-in-rate, those approved to convert, and those rejected are statistically significant even in the presence of controls for AFQT, education level, years of service (YOS), race, and gender.
- Difference in mean between those approved to convert and those rejected becomes insignificant in the presence of fiscal year controls or by controlling for choosing "convert only."

The table shows the share of Sailors in each rack and stack outcome group (i.e., approved to reenlist-in-rate) who were fast to E4. Looking at the first data column (All applicants), 27.5 percent of those Sailors who were approved to reenlist-in-rate were fast to E4. The results for all applicants are positive: a larger percentage of Sailors who were approved to convert were fast to E4 than those who were rejected for reenlistment, and a larger percentage of Sailors who were approved to reenlist-in-rate were fast to E4 than those who were approved to convert. However, 8 percent of those rejected for reenlistment were fast to E4. If these Sailors are predominantly those who chose convert only, this result is less troubling because it means that these high-quality Sailors limited their own options as opposed to the quality screen limiting their options. The last two columns show the shares for those who said "NO" to convert only and "YES" to convert only, respectively.

The table shows that there are large differences in the shares of applicants who were fast to E4 when you control for whether Sailors chose "convert only" as their reenlistment option choice. Of those who said "NO" to convert only and who were rejected for reenlistment, 6 percent were high-quality Sailors. This is additional evidence that the current stacking algorithm may result in an inconsistent quality cut.

Do high-quality Sailors reenlist at higher rates?



- High-quality Sailors reenlist at slightly higher rates

Share of Sailors in each group who reenlist			
Group	Overall	Fast to E4	Not fast to E4
Approved to reenlist-in-rate	71.5	72.8	71.1
Approved to convert	64.6	69.6	63.6

- Results are based on small subsample of all applicants
 - 93,157 total applicants
 - Exclude FTS personnel, those told to separate or reapply, and rollovers → 83,633
 - Exclude those who have not reached the decision point, who attrite before decision point, or whose reenlistment decision is unobserved → 27,216

If we define high quality as fast to E4, we see that high-quality Sailors do reenlist at slightly higher rates. However, we caution that these results are based on a small subsample, less than 30 percent, of all PTS applicants. We have to wait to see if these results hold up as more of the Sailors who applied to reenlist via PTS reach their reenlistment decision point.

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Outline



- Background
- How does PTS work?
- Summary of PTS outcomes
- Is PTS achieving its goals?
- Conclusions
- Recommendations

Conclusions



- Limited evidence that the force is more level-manned now than it was 3 years ago
 - Fewer Sailors in CREO 3 ratings are applying to reenlist
- 85% are allowed to reenlist-in-rate with no guarantee that the highest quality Sailors will reenlist
- Conversion mechanism is underused
- Quality cut may be inconsistent

Our analysis has found limited evidence that PTS has been successful at leveling manning. With the exception of the current (January 2006) CREO instruction, we do find that fewer Sailors in CREO 3 ratings are submitting applications than were doing so under earlier CREO instructions. However, 85 percent of Sailors applying to reenlist are allowed to do so with no guarantee that the best Sailors actually reenlist. Furthermore, we believe the conversion mechanism in PTS is underused. Conversions are approved for only 6 percent of applicants, even though there is still a large number (50+) of overmanned ratings. It is unclear whether this is due to lack of available conversion quotas or due to the fact that the CREO categories are broadly defined. Conversion quotas are available in only a few ratings, and only 42 percent of quotas available are taken. At the same time, a rating that is overmanned by 20 Sailors is treated the same as a rating overmanned by 200 Sailors.

We also find that the quality screen for reenlistments may be inconsistent as evidenced by the fact that 8 percent of the Sailors who are rejected for reenlistment are high quality.

Outline



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Recommendations



- On improving the PTS system
 - Leverage information technology
 - Change the definition of quality
 - Reexamine how manning levels are categorized
- On expanding the PTS system
 - Improve quality measure to expand to Zone B
 - Voluntary Separation Pay better than PTS for Zone C

Since this study began, the PTS program has been expanded to include all Zone A Sailors as opposed to only those in overmanned ratings. Assuming that the Navy is likely to continue to use a PTS-like system to control reenlistments, we offer some suggestions for improving PTS. In addition, interest has developed in further expanding the PTS program to Zone B and Zone C. Although our analysis of the PTS program focused on whether PTS is achieving its goals for Zone A and didn't directly address the possible expansion to Zones B and C, we do think it informs decisions about expanding the program. Therefore, we also offer some thoughts on expanding PTS to Zones B and C.

Recommendation: Leverage information technology



- Connect PTS to other Navy personnel management systems
 - SRB application process
 - Fleet RIDE
 - SELRES or Reserve “Continuum of Service” opportunities
- Automate conversion opportunities so that Sailors are considered for all open ratings (including FTS ratings)
 - Automate conversion requirements so that Sailors aren’t taking quotas away from other Sailors because they are unqualified

Even if the quality measure in PTS was selecting the best Sailors for reenlistment, there is no guarantee that these Sailors will reenlist. Connecting the PTS system to the SRB process could provide a mechanism by which the Navy could incentivize the highest quality Sailors to reenlist. That is, Sailors may not know that reenlistment bonuses exist in another rating for which they qualify. Connecting the two systems would give Sailors more information on which to base their reenlistment decisions. It might be the case that Sailors say they are not willing to convert due to lack of information. The Fleet Rating Identification Engine (RIDE) is a Web-based program designed to assist Sailors in making a more educated choice about which career path to choose. Connecting PTS to Fleet RIDE can help Sailors identify *undermanned* ratings that match their interests and for which they are qualified. It will also help prevent quotas from being given to unqualified Sailors, which PTS program managers tell us occurs despite the fact that COs are asked to verify that Sailors qualify for conversion choices before submitting applications.

Depending on the CREO category of the Sailor’s rating, a Sailor (even a high-quality Sailor) may be denied authority to reenlist. However, there may be opportunities for the Sailor in other communities in the Navy—either another rating that was not listed as a conversion choice or as a member of the Navy Reserve. Automating the conversion opportunities is one way to offer more opportunities to Sailors. Tying the PTS system to other systems would allow Sailors and the Navy to find the best match based on the Sailor’s qualifications/desires and the Navy’s needs.

Recommendation: Change the quality screen



- Simplify the stacking algorithm
 - Current algorithm is too complex to be transparent to Sailors
 - Koopman (2006) recommends using speed of promotion relative to AFQT at time of enlistment
- Widen the screening timeframe and reference population
 - Current quality screen is relative at best
 - Consider all Sailors in a rating/EMC within 6-12 months of EAOS
 - Reexamine whether rating/EMC is correct reference group

The current stacking algorithm is too complex to be transparent to Sailors. To provide incentives, a quality measure should be transparent to those being evaluated by it (i.e., the Sailors should have a general idea of where they fall). Therefore, we recommend simplifying the stacking algorithm. One option is speed of promotion within one's rating/EMC relative to AFQT at the time of enlistment.¹³

Furthermore, the current quality screen is relative at best because Sailors are compared with others in their EMC who “happened” to apply that month. To ensure that the Navy is keeping the best quality, we recommend widening the reference pool. If all Sailors must enter the PTS system at 12 months to EAOS, and are compared with others within 6-12 months of EAOS in their EMC, then monthly variations in the quality cut would decrease. This would essentially be a 6-month moving average as opposed to 1-month averages.

For some ratings, it might be appropriate, even preferable, to compare all Sailors in that rating with one another. However, in other ratings (e.g., nuclear ratings), the EMC is the appropriate reference group. The Navy might want to reexamine these reference groups to determine which occupations are comparable and which are not. This would also give the Navy the opportunity to examine and to take advantage of overlaps in training. Overlaps in training might make it more cost-effective to retrain some Sailors than to grow and train brand new Sailors.

¹³ Another study in this project contains a fuller discussion on how to measure quality. See Martha E. Koopman, *Improving Reenlistment Incentives and Processes*, Jan 2007 (CNA Research Memorandum D0015254.A1).

Recommendation: Reexamine how manning levels are categorized



- Create CREO categories that indicate the degree to which ratings are overmanned
 - CREO categories are too broad
 - Enlisted community managers have the most up-to-date information on their communities
 - Separate CREO categories by paygrade undermine the quality screen

Given that conversions are approved in only 6 percent of the cases and less than half of conversion quotas are taken, the conversion mechanism in PTS seems to be underused. We recommend reexamining how manning levels are categorized. Whether a rating is “overmanned” is relative in that it is the degree to which ratings are overmanned that should dictate the flow of Sailors in or out of the rating. Enlisted community managers have the most up-to-date information on their communities. Changing how CREO categories are determined would also allow community managers to better signal their needs.

In addition, the Navy might want to consider how having separate CREO categories for E1s through E4s, E5s, and E6s interacts with the quality screen in PTS. In a number of instances, a rating is CREO 3 for an E5 but CREO 2 or CREO 1 for E1s through E4s. In such a case, a high-quality (fast to E4 and/or fast to E5) Sailor who was promoted to E5 in his or her first term may not be able to reenlist, whereas a lower quality E1–E4 can reenlist because of CREO category differences. This undermines the stacking algorithm because the algorithm would rank that E5 Sailor as one of the top applicants.

Recommendations on expanding PTS to Zones B and C



- Zone B reenlistment system
 - Could provide a quality screen prior to YOS 10-12 when retirement “pull” sets in
 - Sailors need to believe that the quality screen is appropriate in order to prevent negative effects on tone
 - Two outcomes: reenlist in rate or separate
- Zone C reenlistment system
 - Flexible, targeted Voluntary Separation Pay is better than PTS-like system

A PTS-like system for Zone B could provide the Navy with a quality screen before the pull of retirement sets in. However, the quality screen would need to be carefully designed so that separations are not perceived as involuntary. At the Zone B reenlistment point (8-9 YOS), there might only be two outcomes: reenlist-in-rate or separate. At this point in a Sailor’s career, in some fields, it might be hard to convert to a new rating and remain competitive. Therefore, a PTS system for Zone B might be quantitatively different from the one in place for Zone A.

At the Zone C reenlistment point, most Sailors are planning to finish out their careers in the Navy. Forcing a Sailor to leave the Navy at this point would be the equivalent of an involuntary separation, and severance pay roughly equal to the value of retirement would have to be paid to avoid a negative effect on the tone of the program. In this case, it would be more effective for the Navy to offer flexible, targeted Voluntary Separation Pay (VSP) and then use a quality screen to determine which applicants should be awarded VSP.

Appendix



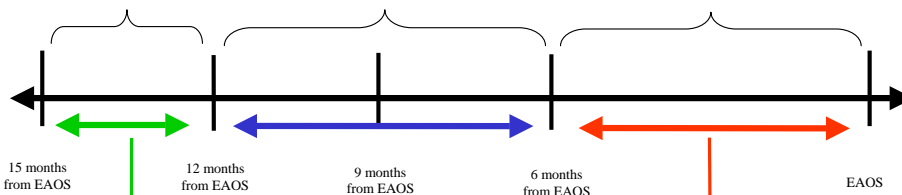
Application timeline



Normal application period (15-12 months prior to EAOS)

Applications will be reviewed from 12 months prior to EAOS up until 6 months prior (or until a quota is granted)— whichever occurs first

Sailors not assigned a quota by 6 months prior to EAOS will be separated at EAOS



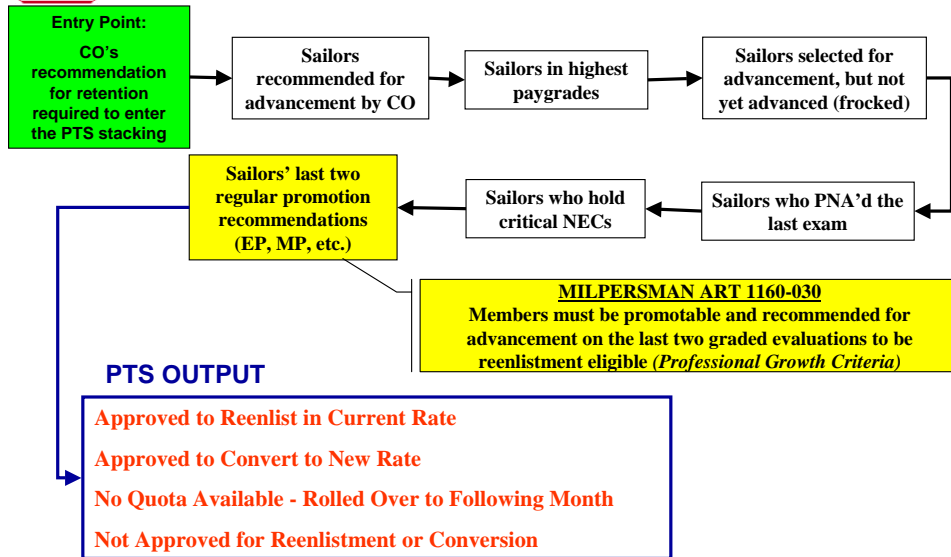
Early Application Exceptions:

- All personnel who require OBLISERV for Orders may submit applications >15 months (ex., PRD prior to EAOS)
- All personnel eligible for STAR reenlistments or eligible to reenlist greater than 12 months from EAOS

All applications received less than 6 months from EAOS will receive only one look

Stacking algorithm

CNA

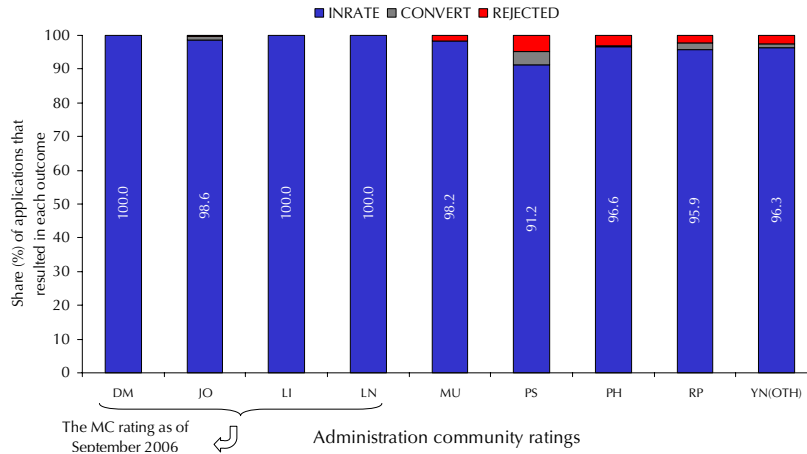


Variables in the PTS data



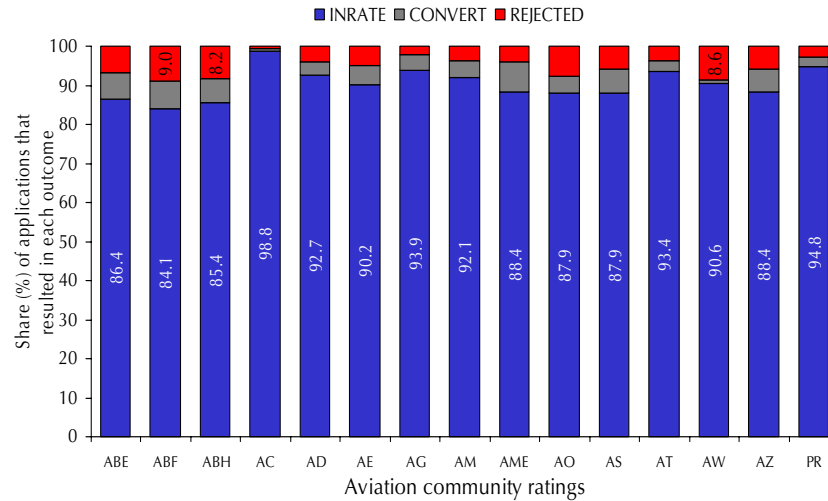
-
- Social Security Number
 - Date Created
 - Paygrade
 - Rating
 - EMC
 - EAOS
 - SEAOS
 - Month_year
 - Recommended for reenlistment
 - Recommended for advancement
 - Desires to reenlist
 - Critical NEC
 - Willing to convert
 - Convert only
 - Conversion choice 1
 - Conversion choice 2
 - Conversion choice 3
 - Converted rate
 - Status (outcome)
 - Rack date
 - End date
 - Times looked at

Summary of PTS outcomes – Administration community



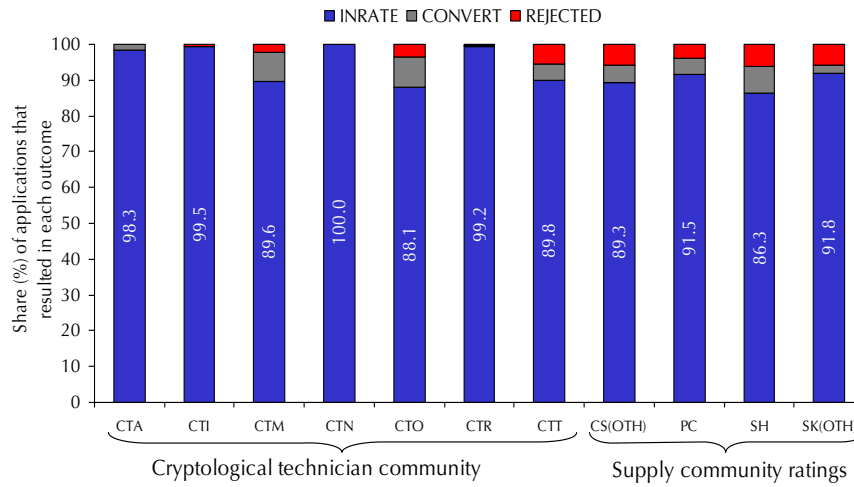
We exclude GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs). We also exclude Sailors with Reapply or Rollover outcomes since these are not “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

Summary of PTS outcomes – Aviation community



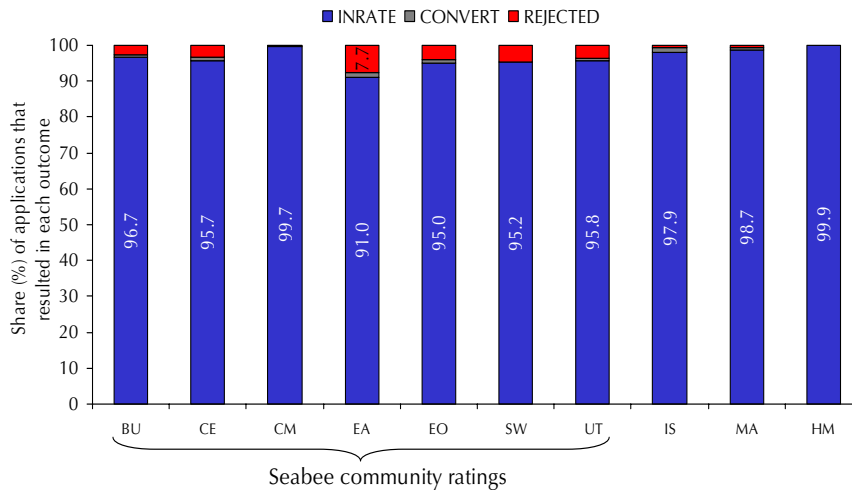
We exclude GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs). We also exclude Sailors with Reapply or Rollover outcomes since these are not “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

Summary of PTS outcomes – Cryptological Technician and Supply communities



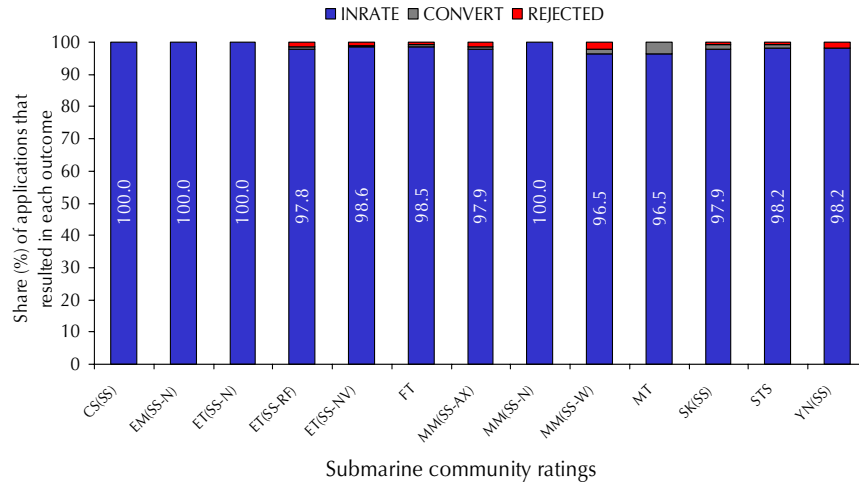
We exclude GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs). We also exclude Sailors with Reapply or Rollover outcomes since these are not “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

Summary of PTS outcomes – Seabees, Intelligence, Security, and Corpsmen



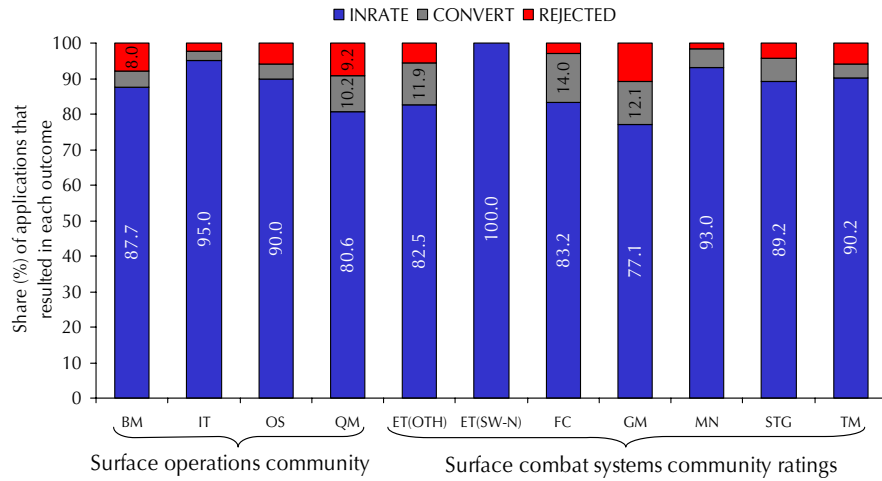
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Summary of PTS outcomes – Submarine community



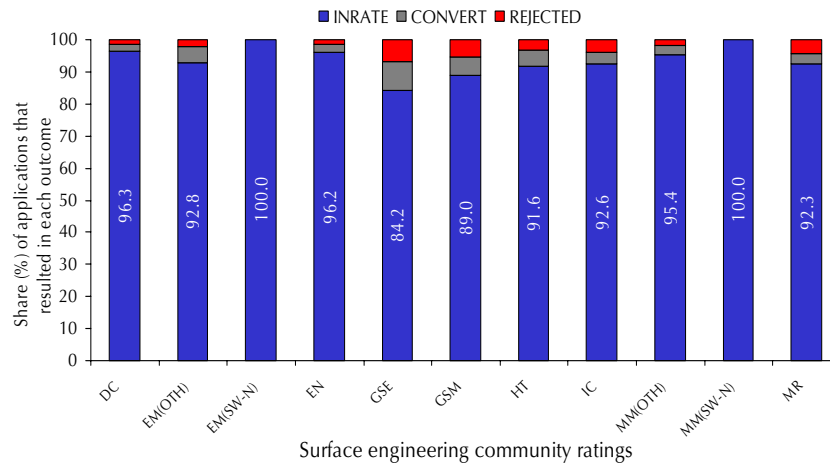
We exclude GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs). We also exclude Sailors with Reapply or Rollover outcomes since these are not “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

Summary of PTS outcomes – Surface Operations/Combat Systems community



We exclude GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs). We also exclude Sailors with Reapply or Rollover outcomes since these are not “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

Summary of PTS outcomes – Surface Engineering community



We exclude GENDETs in the Mxxx EMC. GENDETs in other EMCs are counted as members of that EMC (e.g., AMANs are counted as AMs). We also exclude Sailors with Reapply or Rollover outcomes since these are not “final” outcomes of PTS; Sailors with these “outcomes” are reviewed again in a future month.

