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# Creating a Pilot Corps for the 21st Century

The U.S. armed services are undergoing a fundamental reshaping and restructuring, driven by tighter budgets, new security challenges, new technology, and selective reliance on reserves. The Air Force, for example, has reduced pilot ranks by a third since 1986 in response to Pentagon belt tightening. While these changes will affect all military services, their impact on the supply of active-duty and reserve pilots in the U.S. Air Force and U.S. Navy and on the experience levels of pilots in those services may be particularly direct and imminent.

Because the Air Force has trained an insufficient number of pilots recently, its demand for pilots will outpace supply in the near future. Moreover, its pilot ranks will be characterized by imbalances in levels of experience through the beginning of the next century. Such an outcome will be a reversal of the adequate supply of pilots that the Air Force has had for the past decade or more.

By the year 2002, the Air Force could face a "critical" shortage, needing as many as 1,400 pilots to meet a projected force requirement of 13,700 pilots. Moreover, the Air Force could find itself with more senior pilots and fewer junior ones than it would prefer. This pilot shortage and skewed experience distribution will reduce the number of pilots with active-duty experience who are available to enter the Air Force Reserve and Air National Guard after 2002.

The Navy apparently will avoid these difficulties: Traditionally, the Navy has trained more pilots proportionately than the Air Force, because its retention rate for younger pilots has been lower than the Air Force's rate. In addition, the Navy's pilot drawdown began later and was slower than that of the Air Force.

Those are the conclusions of a recent report released by RAND's National Defense Research Institute. The report summarizes several studies related to the defense

drawdown's impact on pilots that the institute conducted for the Office of the Secretary of Defense.

## IMPLICATIONS OF PILOT SHORTAGES IN A SHRINKING AIR FORCE

The Air Force won't just be short of pilots. The distribution of experience levels within its pilot corps after the turn of the century may be skewed. Without changes in training and retention strategies, the Air Force could end up in 2002 with a pilot population that is more senior than it would prefer, a disproportionate share of its pilots having achieved a rank where they typically would have moved out of cockpits into ground-based staff positions. The potential pilot shortage and skewed experience distribution within pilot ranks would also pose operational challenges, because there will be a shortage of pilots with six to ten years of service. These pilots are very experienced and are likely to be in cockpits or to be providing essential operational supervision in the services' flying squadrons.

## ALTERNATIVES FOR CLOSING THE GAP

Pilot shortages are nothing new. In 19 of the 44 years from 1950 through 1993, the Air Force's pilot population was below the service's demand. Traditionally, training new pilots and retaining pilots have been the two principal instruments used to mitigate shortages.

RAND researchers looked at a variety of options that the Air Force could adopt beginning in fiscal year 1997 to forestall or change the character of the shortage projected to occur by the turn of the century. Those options were:

- Retaining more pilots from 1998 through 2002
- Training more pilots beginning in 1997
- Training more pilots beginning in 2000
- Training more pilots if retention goes down.

As the accompanying figure shows, no strategy solves the basic numbers problem. Nor does any strategy adequately change the ratio of senior pilots to junior pilots.

RAND's findings indicate that the best solution is to train more pilots early, and this strategy has been largely incorporated in current Air Force plans. This approach could reduce the projected shortage to 900 pilots in 2002 and, more than any of the alternatives that RAND researchers studied, would help reduce the shortfall and create a pilot corps that more closely matches the required experience profile. In addition, a number of other measures, outlined below, could be taken to minimize the national-security impact of that 900-pilot shortage.

### OTHER WAYS TO AFFECT DEMAND AND SUPPLY

Reducing Air Force demand projections is one way to close or eliminate the gap between supply and demand: If

the Air Force can further reduce the number of pilots it places in staff or training positions, it may not need 13,700 pilots in 2002, the RAND analysis suggests.

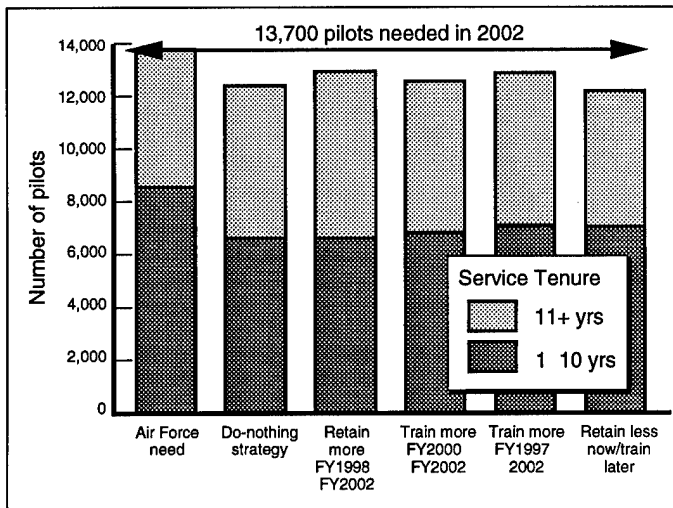
The Air Force should also consider changing its assignment policy for pilots. By moving away from voluntary assignments, whereby pilots choose the location and type of their duty, the Air Force should be better able to absorb new pilots into operational units and thus more closely approximate the experience patterns it desires.

Finally, as shortages materialize in the future, the Air Force may have to staff critical flying billets at the expense of less critical billets. In addition, the Air Force may have to place selected Air Force Reserve and Air National Guard personnel on active duty or use prior-service personnel to fill critical needs.

### RESERVES MAY SUFFER

The projected pilot shortages may affect the number of pilots who join reserve units after leaving active duty. Historically, more than 75 percent of Air Force Reserve pilots and more than 50 percent of Air National Guard pilots have come from active-duty ranks. And because of recent Air Force reductions of pilot rosters during the defense drawdown, the number of pilots waiting to join reserve units today is near an all-time high.

But this situation is likely to change dramatically by the year 2002. Given the overall reduction in the pilot pool and the limited number of new pilots trained in the early 1990s, the number of individuals with six to twelve years of experience—the cohort that's most attractive to the reserves—who will leave active duty also will drop. This spells a bleak hiring environment for certain reserve units that are most dependent on active-duty Air Force personnel for their pilots.



**Air Force Active-Duty Pilot Pool in 2002: Too Small, Too Senior**

RAND research briefs summarize research that has been more fully documented elsewhere. This research brief describes work done for the National Defense Research Institute and documented in Harry J. Thie, William W. Taylor, Claire Mitchell Levy, Sheila Nataraj Kirby, and Clifford M. Graf II, Total Force Pilot Requirements and Management: An Executive Summary, MR-646-OSD, 1995, 35 pp., \$7.50, ISBN: 0-8330-2322-5, which is available from RAND Distribution Services, P.O. Box 2138, Santa Monica, CA 90407-2138 (Telephone: 310-451-7002; Fax: 310-451-6915; or Internet: order@rand.org). Abstracts of all RAND documents are available for review on the World Wide Web (<http://www.rand.org>). RAND publications are distributed to the trade by National Book Network. RAND is a nonprofit institution that helps improve public policy through research and analysis; its publications do not necessarily reflect the opinions or policies of its research sponsors.

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