



**Exercise Mountain Shield, Task  
Force 11, and Visual  
Readiness  
(Reprint)**

**By**

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**Aircrew Health and Performance Division**

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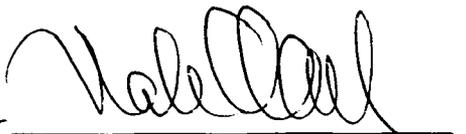
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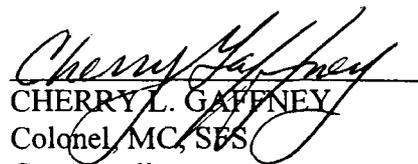


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# Exercise Mountain Shield, Task Force 11, and Visual Readiness

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This report, in an effort to assist in the development of future operational and planning guidelines, presents data from a no-notice exercise involving an aviation brigade in Germany preparing for possible deployment to Bosnia. One hundred twenty-two soldiers (of 918) requested vision screening during predeployment processing. Twenty-four possessed 20/20 vision or better and simply required duplicate orders of needed eyewear. Ninety-eight required an updated refraction. The three battalion-level units provided equal numbers of soldiers requiring screening and examination. Although the lower enlisted grades presented in the greatest numbers, the distribution in terms of percentage was equivalent across all ranks. Myopes outnumbered hyperopes with a spherical distribution peak at - 1.50 diopters, and a majority possessed 1.00 diopter of astigmatism or less. Assuming 40% of all soldiers are spectacle wearers (ametropic), this brigade of 518 soldiers had, then, roughly 210 ametropes, with 60% of them (122) requiring last-minute ordering of required eyewear, 98 of those after refractive examination. Possible solutions to this readiness issue have been developed but require sufficient command emphasis to be effective.

## Introduction

To be considered visually ready for deployment, soldiers requiring a correction must have two pairs of glasses and one set of protective mask optical inserts in a current prescription. Historically, maintaining this readiness requirement has been difficult. However, there are no Army studies in the literature documenting this readiness problem. It can be assumed that many after-action reports were generated after Army deployments to Panama, Saudi Arabia and Kuwait, Somalia, Haiti, and Bosnia. Yet, a MEDLINE search reveals no open literature publication on optical readiness. This report, therefore, chronicles the visual readiness of a U.S. Army Europe (USAREUR) attack aviation brigade with the intention of beginning a lengthy open literature dialogue on this topic.

On May 30, 1995, Exercise Mountain Shield was inactivated under the auspices of the Southern European Task Force to prepare for support of a possible contingency mission in the former Yugoslavia. A number of corps-level aviation units were alerted for participation. This included the 11th Aviation Brigade from Storck Barracks at Illesheim, Germany, designated Task Force 11 (TF 11). On May 31, the brigade flight surgeon called the nearest Army hospital (the 67th Combat Support Hospital) requesting ophthalmic support in preparation for the

proposed deployment. The Chief of the 67th Combat Support Hospitals Optometry Clinic arranged to cancel the next 2 days of scheduled appointments and traveled from Wurzburg to Illesheim to conduct predeployment screenings and examinations. Additionally, several Apache pilots assigned to the 11th Aviation Brigade were contact lens-wearers requiring predeployment examination and an exigent supply of contact lenses.

Complicating matters was the recent fielding of the M-40 protective mask within USAREUR for which many soldiers had not updated their inserts. Consequently, 122 soldiers were initially evaluated or screened, with 98 of them requiring refraction and an updated or new prescription. The other 24 soldiers had no change from their habitual correction and required only duplicate prescriptions for the new protective mask Inserts. All orders for M-40 protective mask Inserts and for military glasses were placed with the United States Army Medical Material Center Europe Optical Fabrication Lab on an immediate priority basis. Given the seriousness of this contingency mission, United States Army Medical Material Center Europe responded appropriately by filling and delivering 100% of the orders within 3 days. To supplement those individual orders, 200 optical insert conversion kits were also ordered. This was to ensure that soldiers with only M-17 inserts, who failed to report for this screening, were able to transfer the lenses from their old M-17 insert carrier (or frame) into the new M-40 insert carrier (or frame). This account profiles the degree of each unit's involvement as well as the soldiers supported and provides a description of their refractive status.

## Descriptive Data and Discussion

Figure 1 is a representation of the battalion-level units that participated in the mass predeployment vision screenings. One hundred twenty-two soldiers were screened: those with 20/20 vision or better had their habitual prescription duplicated. Those with visual acuity worse than 20/20 received a clinical refraction to update their prescription. Any required inserts/glasses were then ordered based on the new prescription. The three battalion-level units screened (7/159 Aviation, 2/6 Cav, 6/6 Cav) each contributed essentially equal numbers of soldiers. The TF 11 Headquarters Company (HHC, 11th Aviation Brigade) additionally contributed a proportionate number of soldiers. Therefore, no one unit was in a higher level of optical readiness than any of the others. The "other units" category in Figure 1 represents soldiers from the Illesheim Health Clinic who were attached to TF 11 for possible deployment.

Figure 2 is simply a display of the grade distribution of those soldiers requiring this emergency deployment-related fix. Although the distribution is peaked in the lower enlisted ranks, it parallels the overall staffing distribution (i.e., there are more junior enlisted personnel assigned to the unit in the first place.<sup>1</sup> Therefore, approximately the same proportion of soldiers within each grade required visual-readiness assistance in preparation for the exercise and possible follow-on deployment.

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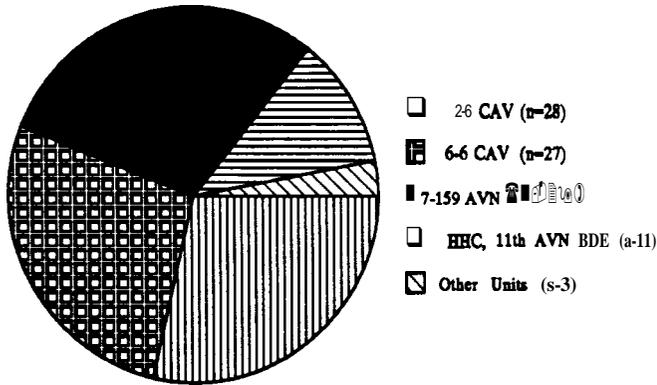


Fig. 1. Given the equivalent sizes of the battalion-level units (and proportional size of the headquarters company), none of the units were any more or less visually prepared for the Exercise Mountain Shield than the others.

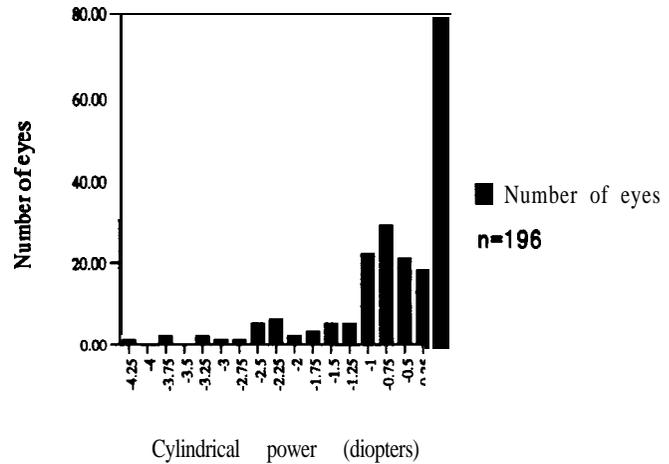


Fig. 4. The vast majority of 11th Aviation Brigade servicemembers examined in preparation for Exercise Mountain Shield exhibited 1.00 diopter of astigmatism or less, with slightly over one-third of the total exhibiting no astigmatism at all.

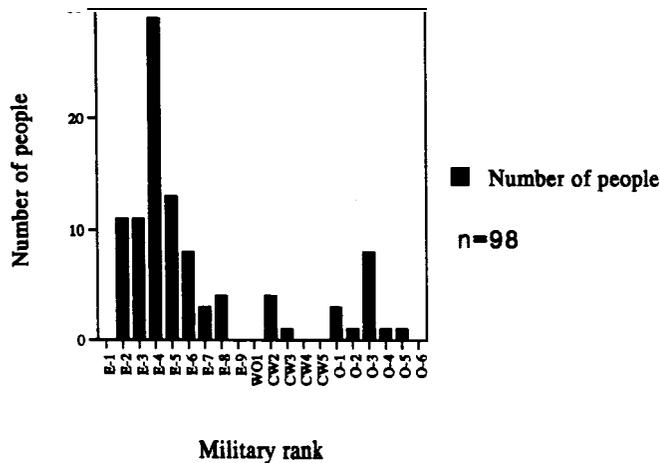


Fig. 2. This distribution roughly represents the Army's rank distribution, revealing visual readiness as a universal issue independent of rank.

Figure 3 is a histogram of the spherical component of the measured refractive errors to show the range and distribution of corrections worn by members of the 11th Aviation Brigade. Figure 4 is a histogram of the cylindrical errors. These data

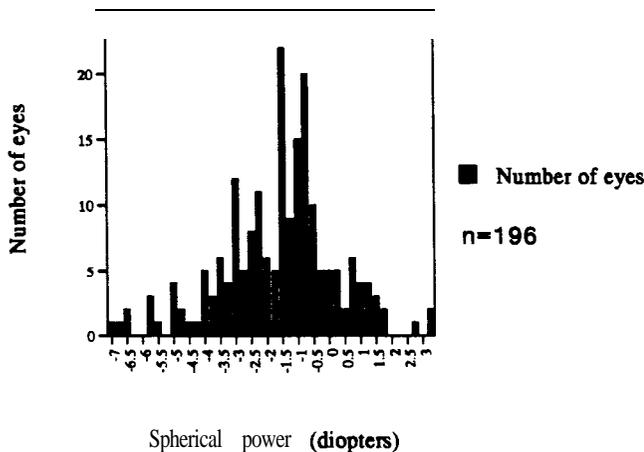


Fig. 3. The distribution peaks at -1.50 diopeters with a longer tail toward myopia than hyperopia. All soldiers with no spherical refractive power had cylindrical power necessitating spectacle correction.

provided more as a reference for fabrication laboratory logistical planners than for commanders. However, they highlight the idea that the aviation community may possibly serve as a microcosm of the rest of the Army in terms of optical requirements. Consequently, all brigade-level units should be allocated the appropriate direct support to meet those requirements. This is something not routinely done at present, with only two optometry officers assigned per division.

**Significance**

The visual screening of 122 soldiers, and the resulting required refraction of 98 of them, was a heavy P-day workload. Given a total of 518 soldiers assigned or attached to TF 11, 23.5% of assigned soldiers either requested or required an updated vision screening. Furthermore, 18.9% of assigned soldiers were not mission-ready in ophthalmic or visual terms. These data are comparable to those from an Air Force study documenting 22% of a representative unit having inadequate visual acuity for deployment and a 25% nonmobility-ready rate.<sup>2</sup> Therefore, these values should be significant to clinical and fabrication personnel for planning purposes and should influence command policy as well.

In the past, various independent, regional initiatives have been organized by division optometry officers (including the author) to track the visual status of spectacle-wearing soldiers by birth month, in the same way that the dental community tracks dental health on an annual basis. Depending on staffing levels and command emphasis, these have had varying degrees of success, until a key individual was reassigned or externally driven priorities were changed. However, no such effort had been undertaken locally in either Wurzburg or Illesheim. Clearly, if these data reflect the visual mission-readiness of typical brigade-level units, then a central program of visual readiness tracking (with periodic examination) would be of substantive operational value.

A recent Department of Defense initiative by the U.S. Army Center for Health Promotion and Preventive Medicine addresses this very problem. The Visual/Optical Readiness data base, part of the Defense Vision Information System,<sup>3</sup> represents a proac-

tive means of tracking soldiers' visual status providing a planned, programmed, visual-readiness fix. Such a program would eliminate the need for disruptive, last-minute response requirements similar to that described in this article.

## Conclusion

Although the visual readiness of this unit might be called into question, it is actually a fair representation of most units (based on personal experience and many after-action reports not available to open review). Central command emphasis in support of an Army-wide institution of the Defense Vision Information System and the Visual/Optical Readiness data base would place vision readiness at the highest priority, thereby increasing unit readiness and deployability, which is the Army Medical Department's primary purpose. Given the small scale of the events related in this report, it was relatively easy for the clinical and fabrication assets to respond to the need and produce a successful result. But when the demand exceeds the assets, or when there are no assets to respond, as will be the case if the Training and Doctrine Command and the Army Medical Department Combat Development Offices eliminate division-level optometry officer and optical fabrication slots, then the line units will be at risk in terms of timely deployability. To quote a fellow field-oriented optometry officer, LTC Buzz Bzdula: "Vision-ready is mission-ready."

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