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SPACE MEDICINE BRANCH REPORT

Passing The Baton

by G. Wyckliffe Hoffler, M.D.

In track one relay runner hands the baton, or on the gridiron the quarterback hands off the ball, to a fellow participant. These events performed correctly appear deceptively simple and the focused process continues without interruption or delay. In reality there has preceded much planning and coordination and seasons of practice to assure competency in execution when it matters most. There are several lesson analogies from the sports world we in the aerospace disciplines could do well to learn and emulate.

First, it is inevitable that a hand-off, passage of the baton, transition must occur. In a sense the original vanguard which spearheaded the dawning of the space era has dominated the field to the present. This dominance cannot continue indefinitely. Original Mercury astronauts and those of the immediately following programs still contribute to the policy and technical direction of our space agenda. Early engineers and scientists of virtually all disciplines continue in active roles across NASA (and the larger space industrial and academic complex). Their continuing presence, from a cohort which began rather precipitously in a demanding time when there were none such, with subsequently and more recently hired employees, has produced the well pondered bimodal age distribution of the current work force within the space arena. While point leaders have in fact changed out several times, the overall philosophy and direction have experienced little modification. Moreover, the vision and thrust of our space programs have realized almost no catalytic stimuli which challenge either generation since the charge of President Kennedy to go to the moon.

Perhaps that was a unique time and objective, not expected to have equivalent successors. But perhaps that may well be a genesis for our apparent loss of resolve and momentum which prevail now across space sciences and industries. Should collegiate or professional sports allow such a gap in recruitment and integrative training, consequences would be obvious and disheartening. Driven in large part by deficit budgetary realities, the present mode of restructuring our Federal systems and our allied academic and private partners is producing a comparable situation in the space endeavor. Former corporate experience is not being transferred and replaced commensurate with its imminent departure. Indeed, we may already be in a position with inevitably adverse consequences due to indecision and inaction of the past.

It would appear that youth are not presented a creditable glimpse of the promise that first set the pace and energized the space venture. Everywhere, but especially with the aerospace communities, the specter of reduced program support, deleted or curtailed programs, and downsized work forces pre-

sents a discrepancy between the promise and reality, a dichotomy of vast potential and impotence. The challenges of exploration and discovery beckon across the many facets of the space frontier while we, the participants, move hesitantly in slow motion against the unrelenting march of time.

It is implicit that, without a hand-off to a fresh, equally competent following generation of participants, the objective cannot be attained. At this juncture we can hear the call for definition of objective. Indeed! Perhaps our problem lies in lack of unanimity, in disparate interpretations. But factually and historically, the adage of "nothing ventured, nothing gained" will undoubtedly prove its validity. More to the point, however, whenever opportunity has presented itself and for whatever reasons a people refused, neglected, or feared to seize upon it, the results presaged their downfall. In this fledgling space venture, not to pursue it with vigor and vision will not only deny us obvious as well as unanticipated benefits in virtually all aspects of human life here on earth, but it will also preclude opening the most imaginative potential the mind and capacities of humankind could comprehend. Who could possibly not want our knowledge of the solar system and of the universe enhanced? Who would not enjoy the vantages of a scientific outpost on another planetary body? Who does not share a dream of exploration of the unknown? Who cannot envision unfathomable gains for earth from technologies achieved and from resources discovered through these explorations? Who will argue that more value may not be attributed to direct and indirect benefits which have come to the private and collective peoples on earth as consequences of our space exploration efforts than the actual value of resources expended? Those who would seriously challenge any of these contentions are not conversant with the human spirit or privy to fact.

When circumstances appear dark and the path unclear is no time to quit the race. We must hand off and assure that pursuit of the objective continues. This event carries at least three vital fundamentals: a) The ultimate exploration of space by earthlings exceeds the capacity of a single people or generation; b) each generation must carry forward some components of a common objective; and c) the training for, timing of, and transition to the successor must be prudently planned, practiced, and performed. Interdiction of any one of these progressions will thwart successful attainment of the prize. This is where the Space Medicine Branch and other organizations with similar vision can take positions and actions which will controvert these growing, negative trends.

The Space Medicine Branch, and indeed the parent Aerospace Medical Association, have vigorously promoted our disciplines. Other interested parties are joining the enterprise. Recognition of the necessity for transferring the vision to another generation has

resulted in programs, activities, and rewards which encourage young scientists, engineers, and students to choose their careers and expend their talents in support of space exploration. These must be expanded in scope and extended to broader and younger population subsets. Our modus operandi does not assume the stance of brainwashing, but people need to know the truth. And the truth about space is too often couched in dread, innuendo, and blame. The American people, and indeed, the world's populations at large, must not be deluded by attempts to separate the inseparable—earth can no more be isolated from its contiguous space environment than one nation from another in our era. Such a position will relegate us (or any people) to a stagnant condition with undesirable consequences. We must reach reasonable accord among the scientific and technological realities of space exploration; the knowledge, values, and hopes the average American has about these activities; and the perceptions our elected representatives construe (or misconstrue) from their vantage points of leadership and resource allocation.

The practical outworking of this will acknowledge that cycles of economic distress will come and can be weathered, from which reinvigoration of the quest for the goal will emerge. We must renew our resolve and redouble our efforts. We must all become virtual crusaders for what we know and staunch supporters of our convictions at our jobs, among our peers, and before our leaders. Somehow, somewhere, sometime this irrational, deluded mind set that space exploration is a whimsical, immoral use of our energies and resources must be righted. The upcoming runners, the baton receivers are expecting our timely and faultless hand-off. We must not stumble or drop the ball and forego the priceless prize. This space venture must not become a mere momentary event in the course of history. It is our destiny. We will not acquiesce. We will not fail.

ASMA FUTURE MEETINGS

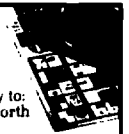
May 5-9, 1996
Atlanta Hilton & Towers
Atlanta, GA

May 11-15, 1997
Hyatt Regency Chicago
Chicago, IL

May 17-21, 1998
Seattle Convention Center
Seattle, WA

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Certification in Aerospace Physiology

Board certification in aerospace physiology was established by the Aerospace Medical Association (AsMA), in part, to:

- 1) Encourage the study, improve the practice, and elevate the standards of excellence in aerospace physiology;
- 2) Provide an avenue for professional and peer recognition; and
- 3) Serve as a goal which members can strive to attain through dedicated self-study and personal contributions to the AsMA and the Aerospace Physiology Society (AsPS).

Certification in aerospace physiology is granted by the Council of the AsMA, acting upon recommendations by the Certification Board.

The Board consists of nine members plus a chairperson and a representative from the AsMA Council. The major functions of the Board relating to candidates are accomplished by the Admissions Committee and Examination Committee. Activities of the Board are governed by the By-Laws as approved by the AsMA Council in November 1989 (published in the February 1991 issue of *Aviation, Space, and Environmental Medicine*, Aerospace Physiology Report).

Board certification is intended for those who have an abiding interest and demonstrated

productivity in the field. In order to meet the eligibility requirements, candidates must possess baccalaureate training either in physiology or in a closely related science with significant training in physiology. Special training in aerospace physiology is also required. Evidence of significant contributions is achieved by 5 years of professional experience in aerospace physiology.

Applicants who have satisfied all of the eligibility requirements, as evaluated by the Admissions Committee are admitted to the certification examination. The Chair of the Admissions Committee will notify Candidates of their admission to the examination and provide them with information on the examination process, including references, subject areas, and sample questions. Preparation for the examination, preferably through group study, should begin at an early date.

The Aerospace Physiology Certification Board will administer the certification examination at the 66th Annual Scientific Meeting of the Aerospace Medical Association in Atlanta, GA, on Sunday, May 5, 1996. The examination (offered in English only) will contain questions covering various areas relevant to aerospace physiology, including, but not limited to, physiology, space physiology, exercise physiology, spatial orientation, acceleration physiology, hyperbaric physiology, decompression sickness, human factors engineering, operational problems (e.g.,

altitude/hypoxia, oxygen requirements, sensory illusions, low pressure operations, parachutes, survival), and relevant areas of basic physics, and atmospheric science. The weighting of these subject areas is not equal and the distribution of the emphasis is reviewed periodically. All examination questions will be of the written objective type (multiple choice, true/false, completion, short answer).

Individuals interested in taking the examination should first establish their eligibility by obtaining an application form and more complete information about certification requirements from the Chair of the Admissions Committee. Please enclose a short biography which describes your background relevant to aerospace physiology, (e.g., degrees, employment, involvement with ASMA and ASPS). Application from candidates desiring to take the 1996 examination must be received by February 1, 1996. Applications received after that date cannot be guaranteed consideration for the 1996 examination. Any late applications not considered for the 1996 examination will automatically be held in abeyance for consideration for the 1997 examination. Send your requests to the Chairman, Admissions Committee at the following address:

**Lt. Col. James Dooley
14723 Forward Pass
San Antonio, TX 78248**