

DoD Military Injury Metrics

Working Group White Paper



November 2002

DoD Military Injury Metrics Working Group White Paper

Executive Summary

1. **Background.** The DoD Military Injury Metrics Working Group was tasked to identify appropriate and standardized military injury metrics for the Department of Defense; to identify the best data sources for the metrics; to identify data gaps and limitations and develop recommendations; and to propose appropriate military injury metric reduction goals.

2. Recommendations.

a. **Military Injury Metrics.** The Working Group recommends four injury metrics for immediate implementation: Injury Case Rate, Lost Day Injury Case Rate, Limited Duty Injury Case Rate, and Lost Days Rate. The Working Group also recommends Limited Days Rate as a future metric.

b. **Target Database.** The Working Group recommends targeting medical data to identify injury cases and capture lost days. At present, the Defense Medical Surveillance System offers the best linkage between medical and personnel data for the calculation of the metrics.

c. **Data Gaps.** Data gaps were identified in the ambulatory medical data, outsourced care, duty limitation information, convalescent leave recording, cause coding, deployment injury data, shipboard injury data, personnel data and safety data. These data gaps are discussed in detail and specific recommendations are offered (pages 11-18). In addition, the Working Group recommends including cost estimation information with the injury metrics (page 13).

d. **Injury Reduction Target Metrics.** The Working Group recommends all four of the recommended military injury metrics for the reduction targets. Targeting all four metrics will provide a more complete picture of military injuries and reduce the potential for error and misinterpretations. Furthermore, due to significant data capture differences among the Services, the Working Group recommends that the injury reduction targets be set based on the individual Service, major command or installation baseline rates and progress be measured based on these internal injury baselines.

e. **Reduction Target.** The Working Group is concerned that setting an unrealistically high injury reduction target—in addition to the other demands currently placed on the military—will result in a perception that the goal is not achievable and, therefore, injury reduction efforts will be limited and ineffective. A goal of reducing the injury metrics 30-50% over 5 years will require a significant and sustained commitment.

f. **Injury Reduction Strategy.** The Working Group recognizes that information and guidance on injury reduction strategies must accompany the military injury metrics. The metrics will capture the attention of the military leadership, but the reduction strategies are critical in providing the process and tools to actually reduce the injuries and meet targeted goals. The Working Group members conducted extensive investigations into military and civilian injury reduction best practices; summaries and specific recommendations are provided (pages 18-20).

3. **Next Step.** The Working Group recommends reconvening the group in one year to re-evaluate the metrics, changes in the supporting databases and any remaining data gaps.

Colonel Mary Lopez, SP
Chair, DoD Military Injury Metrics Working Group

DoD Military Injury Metrics Working Group White Paper

Contents

1. References.....	4
2. Goal.....	4
3. Membership	4
4. Working Group Parameters	4
5. Metrics	4
6. Definitions.....	5
7. Target Data and Database	7
8. Target Metrics.....	7
9. Future Metric	9
10. Injury Reduction Target.....	9
11. Reduction Target Concerns and Recommendations	10
12. Major Data Gaps.....	11
a. Medical Data	11
b. Deployment Injury Data	11
c. Shipboard Injury Data.....	12
d. Personnel Data	12
13. Cost Estimation.....	13
14. Future Recommendations	13
a. Regulatory	13
b. Data Gaps.....	14
15. Injury Reduction Strategy.....	18

Appendixes

A. 25 July 2002 Tasking Memo.....	A-1
B. Membership	B-1
C. Working Group Parameters	C-1
D. List of Major Commands	D-1
E. ICD-9-CM Code List.....	E-1
F. Definitions.....	F-1
G. Justification Data for 30 Day Threshold.....	G-1
H. Sample Web Page with All Four Metrics	H-1
I. Example of the DNBI Injury Data Web Page.....	I-1
J. Cost Calculation Formulas and Sample Web Page Cost Report	J-1
K. Composite Health Care System II (CHCSII).....	K-1
L. Theater Information Medical Program (TMIP).....	L-1
M. Global Expeditionary Medical System (GEMS)	M-1
N. Shipboard Automated Medical System (SAMS).....	N-1
O. Defense Integrated Manpower Human Resources System (DIMHRS).....	O-1
P. Injury Reduction Strategies – Best Practices	P-1

DoD Military Injury Metrics Working Group White Paper

1. References.

- a. Secretary of Defense tasker, 4 February 2002, regarding lost days.
- b. Secretary of Defense tasker, 18 March 2002, regarding reducing accidents by 50 percent.
- c. Secretary of Defense Memo, signed by Mr. Bowling and Mr. Angello, 25 July 2002, subject: Military Metrics Working Group. [See Appendix A.](#)
- d. Readiness Programming & Assessment brief to Chair, Department of Defense (DoD) Military Injury Metrics Working Group, 6 August 2002.

2. Goal. To reduce on-duty non-hostile fire injuries—

- a. Develop clear, consistent, timely measurement of military injury lost time.
- b. Identify best data sources to support metrics.
- c. Limit data sources to existing systems.
- d. Develop metrics similar to the DoD civilian metrics.
- e. Propose military lost time reduction goals.

3. Membership. [Appendix B](#) presents the list of Service and agency representatives participating in meetings and conference calls.

4. Working Group Parameters. [Appendix C](#) presents the parameters the members outlined to clarify the Working Group instructions provided in the 25 July 2002 Secretary of Defense memo. Each parameter was considered during the white paper development process.

5. Metrics.

- a. **Recommended Military Injury Metrics.** The following table presents:
 - Four currently available metrics recommended for use—Injury Case Rate, Lost Day Injury Case Rate, Limited Duty Injury Case Rate, and Lost Days Rate
 - One metric for future use—Limited Days Rate (severity rate).

Metric	Definition	Calculation
Injury case rate*	The rate of new injury cases per 100 military personnel.	$\frac{\# \text{ of all new injury cases}}{\# \text{ of military personnel}} \times 100$
Lost day injury case rate*	The rate of injury cases resulting in lost duty time per 100 military personnel.	$\frac{\# \text{ of lost day injury cases}}{\# \text{ of military personnel}} \times 100$
Limited duty injury case rate*	The rate of injury cases resulting in a limited duty prescription per 100 military personnel.	$\frac{\# \text{ of limited duty injury cases}}{\# \text{ of military personnel}} \times 100$
Injury lost days rate*	The number of lost workdays resulting from injuries per 100 military personnel.	$\frac{(\text{Injury quarters} + \text{hospital days})}{\# \text{ of military personnel}} \times 100$
Limited days rate* (Future metric)	The number of limited duty days resulting from injuries per 100 military personnel.	$\frac{(\text{Injury limited duty days})}{\# \text{ of military personnel}} \times 100$

*Rates are based on annualized monthly data: $\frac{(\# \text{ of injury cases for the month})}{(\# \text{ of military person-months})} \times 100 \times 12 \text{ months}$.

b. **Drill Down.** Each of these metrics will be provided by:

- DoD
- Service
- Major Command ([See Appendix D](#))
- Geographical Area by Installation
- Major Command within Installation**
- Installation within Major Command**
- Injury Category ([See Appendix E](#))
- Cause Category (future)

***Note:* For both the “Major Command within Installation” and “Installation within Major Command,” the population threshold for the military metric drill downs must be over 500 military personnel. Statistics on populations under 500 may be inaccurate and unstable, leading to inappropriate conclusions and misdirected command accountability.

6. Definitions.

a. **Injury.** The definition of an injury is based on Department of Defense Instruction (DODI) 6055.7 ([see Appendix F](#)) with the following qualifiers:

- Injuries are nonfatal traumatic wounds or other conditions of the body caused by external force or exposure (i.e., heat or cold injury) or non-traumatic physiological harm or loss of capacity caused by continued or repeated neuromusculoskeletal stress or strain.
- Injuries may occur in garrison, field or deployed environments; on or off-duty; and may or may not result in lost work time (hospitalizations, quarters, convalescent leave) or limited duty prescriptions.
- Injuries do not include any conditions occurring as a result of hostile fire, the direct action of an enemy, or hostile force or criminal acts where intent is known.
- Injury cases are identified by specific International Classification of Disease (ICD-9-CM) codes ([see Appendix E](#)) that were selected by the Army Medical Surveillance Activity and validated by the DoD Military Injury Metrics Working Group.

It was necessary to use definitions of both “injury” and “illness” from DODI 6055.7 to include traumatic cases that are identifiable as to time, place, and specific event or incident and cumulative trauma cases (e.g., stress fractures, tendonitis, carpal tunnel syndrome) that occur as a result of continued and repeated exposure to physiologic or biomechanical stresses in the military injury metrics.

- b. **New Injury Case.** The first occurrence of a specific 3-digit ICD-9-CM code for an individual in a 30-day period.

Medical ambulatory data does not consistently differentiate new cases from existing conditions. It was necessary to establish a time threshold to provide an indication of new cases for the injury metrics. The Working Group reviewed medical ambulatory data and found no substantial differences in ambulatory care visits by individuals with a specific diagnosis between 30, 60, or 90 days. Supporting data is provided in [Appendix G](#).

The ICD-9-CM codes do not provide laterality (right or left side) of injury. Therefore, there is a potential for underreporting if an active duty member has two separate injuries with the same ICD-9-CM code in a 30-day period (e.g., a Service member may sustain a right ankle sprain on one day and a left ankle sprain the next week, but the case would be recorded as one occurrence).

- c. **Lost Time Injury Case.** The definition of a lost time case is based on the definition provided in DODI 6055.7 ([see Appendix F](#)) with the following clarification: “disability” is considered any pain or impairment that would cause a person to seek medical care.

A lost day injury case is operationally defined as the first occurrence of a hospitalization or quarters prescription for a specific 3-digit ICD-9-CM code for an individual in a 30-day period.

- d. **Limited Duty Injury Case.** The first occurrence of a limited duty prescription for a specific 3-digit ICD-9-CM code for an individual in a 30-day period.
- e. **Military Personnel.** The definition of military personnel is based on the definition provided in DODI 6055.7 (see Appendix F). This definition includes Reserves in active status or active Service and full-time National Guard. This does not include Inactive Duty Training (IDT).

7. Target Data and Database.

- a. The Working Group recommends using medical hospitalization and ambulatory clinical data to identify injury cases and capture lost days. The medical care data is the most complete source of injury information at this time. The Service Safety Centers collect detailed case investigation information; however, there is significant underreporting and inconsistencies in coding among the Services.
- b. The Working Group recommends using the Defense Manpower Data Center (DMDC) personnel data for the Service, major command, and location military strength calculations and to link injured individuals using social security number information to a specific Service, major command, and location.
- c. At this time, the only database routinely linking military medical data with military personnel data is the Defense Medical Surveillance System (DMSS). This database receives regular downloads of data as shown in the following table.

Data Source	Data Transfer Frequency	Time Lag
Hospitalization*	Monthly	2-4 months old
Personnel	Monthly	2-4 months old
Ambulatory – Outpatient Care	Daily	3-5 days old

* Hospitalization data transfer frequency is determined by the Joint Commission for Accreditation of Healthcare Organizations (JCAHO) requirements.

8. Target Metrics.

- a. **Injury Case Rate.** The rate of new injury cases per 100 military personnel.

$$\frac{\text{\# of all new injury cases}}{\text{\# of military personnel}} \times 100$$

This rate provides a detailed picture of the magnitude of injuries for the population of interest by capturing *all* injuries occurring during the month that result in medical care regardless of the lost time or limited duty outcomes. In essence, this metric indicates the percentage of military personnel who become injured during the month.

Information on the injury event is pulled from both hospitalization and ambulatory medical data. As a result, the entire spectrum of injuries is covered in the metric, from

minor to severe injury cases. The metric does not reflect the severity of the injuries for the population, only the occurrence of injuries.

- b. **Lost Day Injury Case Rate.** The rate of injury cases resulting in one or more lost duty days per 100 military personnel.

$$\frac{\# \text{ of lost day injury cases}}{\# \text{ of military personnel}} \times 100$$

This metric provides information on the severity of the injuries for the population of interest. Generally, the more severe injuries result in lost duty time. The metric indicates the percentage of military personnel who had an injury that resulted in at least one lost day during the month.

Information for this metric is pulled from both hospitalization and ambulatory medical data. Injury cases included in this metric range from relatively minor cases requiring one lost duty day to severe injury cases requiring hospitalization. The metric does not reflect the severity of lost day injury cases, only that a lost day case occurred.

- c. **Limited Duty Injury Case Rate.** The rate of injury cases resulting in a limited duty prescription per 100 military personnel.

$$\frac{\# \text{ of limited duty injury cases}}{\# \text{ of military personnel}} \times 100$$

This metric also provides an indication of the severity of the injury cases for the population in that the more severe cases will result in a limited duty prescription. This metric directly relates to readiness and productivity as a limited duty prescription can result in a “non-deployable” status classification for the military member. This metric indicates the percentage of military personnel who were on limited duty as a result of an injury at any point in time during the month.

This metric is primarily based on ambulatory clinic data that records limited duty prescriptions, but not the actual number of days of limited duty. As a result, both minor injuries resulting in one day of limited duty and severe injuries resulting in several months of limited duty are included in the metric. The metric also does not reflect the extent of the duty limitation or the impact on the military member’s productivity level. Describing the impact on productivity is particularly challenging as it depends not only on the type and extent of the injury but also the Service member’s military specialty, actual job tasks, and other work requirements.

- d. **Injury Lost Days Rate.** The number of lost workdays resulting from injuries per 100 military personnel.

$$\frac{(\text{Injury quarters prescriptions} + \text{hospitalization days})}{\# \text{ of military personnel}} \times 100$$

This metric provides more detailed information on the impact of injuries on readiness and productivity as it is based on the *actual* number of lost days due to injury-related hospitalizations and every prescription for quarters.

The Working Group recommends that each quarters prescription be counted as one day for this metric as the medical ambulatory data does not provide information on the exact number of days prescribed.

The most significant limitation with this metric at this time is that the available lost days information does not include convalescent leave time. Although convalescent leave time may be significant, the physician's recommendation is not recorded and this leave time is approved and processed at the unit level.

9. Future Metric.

Limited Days Rate. The number of limited duty days resulting from injuries per 100 military personnel.

$$\frac{(\text{Injury limited duty days})}{\# \text{ of military personnel}} \times 100$$

This metric will be particularly relevant for military commanders as it indicates the direct mission impact of injuries. This metric provides an indication of the severity of injuries, readiness impact, and productivity impact.

At present, the number of limited duty days is not captured in the medical hospitalization or ambulatory clinic data systems. The Working Group discussed the feasibility and appropriateness of estimating the number of limited duty days based on ICD-9-CM code information. However, the Working Group concluded that the accuracy and validity of such estimates would be questionable as these estimates would require assumptions about the severity of the injury and the effect of a disposition on an individual's ability to work.

10. Injury Reduction Target.

The Working Group recommends using all of the four currently feasible metrics (excluding limited days rate) to gauge progress on injury reduction targets. An example of the Web presentation of the four metrics is included at [Appendix H](#).

The Working Group bases this recommendation on several issues and serious concerns with data accuracy. The chosen metrics must be as accurate as possible at baseline and over time. The accurate recording of lost days, limited duty days, and other medical data has not previously been a priority. The amount of inherent error in the identified metrics is unknown at this time. Holding commanders accountable or measuring intervention program effectiveness based on a single metric with unknown error can lead to inappropriate and inaccurate conclusions. Monitoring all four metrics over time will

provide a more complete and accurate picture of military injuries and the effectiveness of injury reduction efforts. In addition, the Working Group recommends reconvening the group in one year to re-evaluate the metrics to determine if one metric has been shown to be more useful or if there is evidence of convergent validity among the metrics.

11. Reduction Target Concerns and Recommendations.

- a. **Use Internal Baselines for Injury Reduction Targeting.** The Working Group is very concerned about inter-Service comparisons or injury reduction benchmarking due to the significant differences in the respective Service missions and the amount and type of medical data captured. Setting injury reduction targets based on other Services' baseline injury rates is not only unrealistic but can have serious negative consequences on military training, preparedness, responsiveness, and ability to accomplish the mission and may ultimately affect the national security of the United States. The Working Group recommends the injury reduction targets be set based on the individual Service, major command, or installation baseline injury rates and progress be measured based on these internal injury baselines.
- b. **Do Not Compare Military Injury Metrics to the DoD Civilian Metrics.** The DoD civilian metrics are based on administrative timekeeping and compensation claim databases that capture information about civilian injuries resulting in a decision to submit a claim. The military metrics are based on medical databases that provide information on a significantly higher percentage of injuries in greater detail. While there is some overlap in military and civilian occupations, most of the military occupations and military task requirements are very different from the civilian occupations. Any comparison between the military and civilian metrics will lead to very misleading and inaccurate conclusions.
- c. **Set a Realistic Reduction Target for All Four Metrics.** The Working Group is concerned that setting an unrealistically high reduction target, in addition to the other demands currently placed on the military, will result in a perception that the goal is unachievable and, therefore, injury reduction efforts will be limited and ineffective. There are substantial reductions possible for targeted high-risk activities such as physical training-related injuries. This paper includes a section on best practices for injury reduction programs (paragraph 15) to assist the military community in developing and implementing injury reduction strategies. A goal of reducing these injury metrics 30-50% over 5 years will require a significant and sustained commitment.
- d. **Allow Injury Reduction Target Adjustments.** The Working Group recommends injury reduction targets allow adjustments as the data systems are implemented and data accuracy improves over the next few years. It is very possible that the metrics will actually show an increase in injury rates even though injury prevention efforts have been successful.

12. Major Data Gaps.

a. Medical Data.

- (1) Ambulatory Data. The ambulatory data module of the Composite Health Care System (CHCS) has several limitations that will affect the precision of the identified metrics. Reviews of the ambulatory data suggest inconsistencies across Services, incomplete data, variations in quarters and duty limitation prescription reporting, and inaccuracies in provider reporting of the ICD-9-CM codes due to provider frustrations and the high time requirements to complete the data fields. The ambulatory data system does not capture detailed disposition information—specifically, the number of lost days prescribed, the number of limited duty days, and the extent of the duty limitation. A field to capture external cause of injury codes (“E-codes”) is included in the CHCS data fields; however, it is not a required field and providers are choosing to not enter cause information due to time requirements. Care provided on an outsourced basis can be identified based on Military Health System (MHS) reimbursement records; however, this data is not structured in a manner that is easily merged with the MHS outpatient data and, therefore, is not included at this time. Finally, care provided on ships, in deployed environments, and at Battalion Aid Stations is not captured centrally in an automated database.
- (2) Hospitalization Data. The hospitalization data provides fairly accurate information on the number of hospital bed days, but does not provide any information on convalescent leave days. Convalescent leave days are recommended by the provider, but actually authorized and approved by the military unit. Therefore, the actual number of convalescent leave days taken may vary from a provider’s recommendations. A field exists in the hospital record for convalescent leave but is not used. Hospitalization data also captures cause information based on Standardization Agreement (STANAG) Code 2050 and can provide some information on duty relatedness; however, reliability of the data is variable due to inconsistencies in reporting and variations in coding practices. Finally, hospitalization data is not centrally reported for ships and deployed environments.

Recommendations: Use existing data as described in the metric definitions section. Recognize the data limitations and potential errors in the interpretation of the data and in the establishment of injury reduction targets. Move the current and near future systems to provide necessary accurate data.

- b. **Deployment Injury Data**. At this time, the only consistent source of deployment injury data is the Disease Non-Battle Injury (DNBI) report. This report is required for deployments by the Joint Staff memorandum MCM-0006-02, “Updated Procedures for Deployment Health Surveillance and Readiness”; however, DNBI reports are only submitted for some deployments and forward deployments do not submit DNBI reports. The DNBI reports are aggregate summaries of injuries and illnesses and do not provide

information on individuals. The data necessary to calculate the recommended metric rates are not consistently collected in deployed environments across DOD.

Recommendations: Provide summary deployment injury data separately from the other metrics on the Web site. An example of the DNBI injury data Web page is provided in [Appendix I](#). Do not attempt to convert DNBI report data to fit with the other metrics as there is no uniform basis for comparison and mixing sources of data can lead to very misleading information and inappropriate interpretations. Ensure that any DNBI information posted on the Web site meets applicable security requirements. Encourage deployment data system development and include deployment injury data with the standard metrics as more detailed deployment data becomes available.

- c. **Shipboard Injury Data.** Shipboard injuries treated on board are not reported to any central medical database and are not included in the metric calculations. In addition, ships do not report DNBI information at this time. Since approximately 30% of Navy military personnel are on ship duty at any time, the Navy injury rates may appear artificially low when compared to the other Services. Adjusting the military strength denominator to correct the rate was proposed; however, personnel records will not support accurate denominator adjustment as personnel assigned to ship duty are not clearly or consistently identified. Serious injuries requiring evacuation from the ship are treated at fixed medical facilities and are included in the medical databases and metrics calculations.

Recommendations: Measure baseline rates and establish injury reduction targets based on internal Service, major command, or installation injury metrics. Do not set baseline rates and injury reduction targets based on inter-Service comparisons. Move planned data systems forward to address this significant data gap.

- d. **Personnel Data.**

- (1) Unit Identification Codes. All of the Services use unit identification codes (UICs); however, the level of identification varies greatly among the Services. To be effective, the military injury metrics should allow a drill down to the battalion or equivalent level. Accurate UIC information with this level of granularity is essential to properly identify a Service member's unit and to properly calculate the population denominator.

Recommendations: At this time, limit drill down capabilities to major command (identified by DMDC) and installation (identified by zip code). Develop a DoD policy on the uniform use and coding of unit identification codes and move to provide a finer level of granularity for the military metrics as this data stabilizes.

- (2) Activated Reservists and National Guard. The current medical data differentiates active duty Service members and activated personnel; however, the current DMDC data that is linked with the medical data does not allow accurate person-time denominator calculations for activated Reservists and National Guard personnel.

Specifically, the available data does not accurately distinguish when a Reservist or National Guard member is actually activated. This is a significant concern as there are 875,000 Selected Reserves with over 54,000 currently activated. Some deployed units consist of up to 70% Reservists. It is very likely that the number of activated Reservists and National Guard personnel will increase dramatically in the near future. At this time, DMDC can provide information on reservists who are on active duty for over 30 days; specifically, it can identify active duty start and stop dates. DMSS has requested these additional personnel fields and will receive this data within the next 3 months.

Recommendations: Limit current metric reporting to active duty members but include metric information on activated Reservists as soon as possible. When the data permits, include activated personnel in all of the metric calculations and as a drill down category.

- 13. Cost Estimation.** The current DODI 6055.7 includes a cost table (E7.T1.) for estimating the cost of injury, disability, or equipment loss; however, the cost information presented is dated (1988) and does not allow an accurate estimate of the financial impact of injuries and accidents. It is very important to be able to accurately describe these financial impacts as these estimates will serve as the basis for resource allocations and financial decisions required to meet injury reduction targets. Basing any decisions on the current cost table estimations will lead to inaccurate conclusions and potentially inappropriate and misdirected resource allocation decisions.

Recommendations: Include basic cost estimates based on current salary and medical cost information on the military injury metrics Web site. Proposed cost calculations and a sample Web page are provided at [Appendix J](#). The Working Group emphasizes that this cost estimate is an interim solution and recommends a systematic and detailed cost analysis and economic model be developed to accurately describe the financial impact of military injuries and accidents in the very near future.

14. Future Recommendations.

a. Regulatory.

- (1) DODI 6055.1, Paragraph E3.11 (Goals, Objectives, Measures of Merit, and Self-Evaluation). Include the five metrics identified by the Working Group (one through four now, the fifth when data becomes available) as Corporate Measures of Merit to identify performance trends and use as planning tools.
- (2) DODI 6055.7. The DODI is currently being revised by Service safety and legal representatives under the oversight of the Office of the Secretary of Defense (OSD) Safety. This effort will refine and update definitions, procedures, and other requirements in support of the Military Injury Metrics Working Group's recommendations and the Service's mishap prevention program efforts. The revision task force has taken action to integrate specific changes required to support

the military injury metrics including revision of injury and illness definitions and the updating of the cost table to more accurately reflect injury and illness costs. The Working Group recommends OSD aggressively support the DODI 6055.7 revision effort.

b. Data Gaps.

(1) Military Health System Data Repository.

Long Term. Corporate medical data will ultimately be stored in the CHCSII ([Appendix K](#)) medical data repository (MDR) and will be accessible for reporting purposes through the MDR. All of the data elements will be uniform across the Services and normalized.

Long-Term Recommendation. The Working Group recommends targeting the CHCSII MDR as the ultimate source of injury data.

Short Term. At present, hospitalization data is stored under various CHCSI hosts. The current plan is for CHCSII to map all of the CHCSI hosts to the clinical data repository (CDR) and transfer 25 months of historical data as well as future data into the CDR. Two CHCSI hosts have been mapped and are currently in the CDR. Approximately 50 other hosts are mapped for the data transfer and it will take about one year to complete the mapping and transfer of data from the remaining hosts. Data transfer and mapping will begin when the Milestone III Decision for CHCSII is approved. This decision is expected within the next few months; however the Overarching Integrated Product Team (OIPT) can give approval to transfer CHCSI data prior to the milestone decision for CHCSII.

Short-Term Recommendation. The Working Group recommends the OIPT consider approving the CHCSI data mapping and transfer to the CDR prior to Milestone III Decision.

(2) Ambulatory Medical Data Accuracy.

Long Term. Eventually, ambulatory medical data will be collected under CHSC II and stored in the MDR. As before, this data will be uniform across DoD and will be complete and normalized.

Short Term. Currently, the quality of the ambulatory data is not optimal. Data validation tests have found some discrepancies. The present Ambulatory Data Module (ADM) is based on an electronic text-based data entry format that users find difficult and time consuming. There have been proposals and discussions on modifying the graphical user interface (GUI) to improve the usability and, therefore, the accuracy of the diagnosis selection and other data elements.

Short-Term Recommendation. The Working Group recommends the ADM GUI be redesigned to improve the interface usability, efficiency, and ease of use.

(3) **Outsourced Care.**

Short Term. The DMSS has established processing rules to allow integration of inpatient outsourced care data and is currently working on the integration of the outpatient outsourced care data with the MHS outpatient data. Both inpatient and outpatient outsourced care data will be integrated and reported within one year.

Short-Term Recommendation. The Working Group recommends supporting DMSS efforts and facilitating the integration of outsourced data as soon as possible. This integration will result in rate increases of 10-15% and must be accompanied by appropriate considerations when making comparisons.

(4) **Duty Limitation Prescriptions.**

Long Term. The DOD Medical Profile Integrated Product Team (IPT) has been formed by TMA, Information Management Division to address physical limited duty issues across the Services. The purpose of this work group is to submit a concept of operations and functional requirements related to Service member limited duty restrictions in CHCSII. The capture and reporting of injury data will more accurately assess the extent of the injury problem, enable command responsibility for injuries, and guide efforts in controlling them.

Pending the Medical Profile IPT recommendations and subsequent approval, the current CHCSII plans include nonmandatory data elements to record the start and end date of the limited duty prescription and a free-text section to describe the duty limitation. This system will be difficult to query and will only provide very basic information about the duty limitations.

Long-Term Recommendation. The Working Group endorses the efforts of the Medical Profile IPT and recommends OSD leadership support and demonstrate commitment to their efforts.

Short Term. At present, the only source of information on limited duty prescriptions is from ADM. The data field only records if a duty limitation was ordered, not the number of days or the specific duty limitations. Since the ADM is now based on electronic data entry, modifications to ADM can be accomplished without significant system change.

Short-Term Recommendation. The Working Group recommends making the duty limitation field mandatory (i.e., if a duty limitation was or was not prescribed) and adding a field to record the dates of the duty limitation period.

(5) **Convalescent Leave.**

Long Term. Convalescent leave recommendations will be included in CHCSII and will be stored in the MDR.

Short Term. CHCS I has nonmandatory fields for convalescent leave and convalescent leave recommendations.

Short-Term Recommendation. The Working Group recommends the convalescent leave fields be made mandatory and the metric formulas be adjusted to include “expected convalescent leave days.”

(6) **Cause Codes.**

Short Term. There are several different cause coding systems currently in use in the DoD. Mandatory STANAG-based cause codes are currently used in the inpatient data and ICD-9-CM External Cause of Injury codes (E-codes) are now allowed in the ambulatory medical data. The safety community conducts investigations into injuries and accidents and uses other generally safety-specific sets of cause codes. Finally, the DOL Bureau of Labor Statistics uses yet another set of cause codes involving a combination of type and source codes. These multiple cause-coding systems prevent comprehensive cause analyses spanning all of the Services and including both inpatient and outpatient data.

Short-Term Recommendation. The Working Group recommends the formation of a focused IPT to review the issue of cause coding and develop recommendations for coding systems suitable for inpatient and outpatient settings, safety investigations, and administrative personnel processing. As an alternative to a focused IPT, consider tasking the DoD Injury Surveillance and Prevention Working Group to address the coding issue specifically.

(7) **Deployment Injury Data.**

Long Term. Eventually, CHCSII–Theater under the Theater Medical Information Program (TMIP) ([Appendix L](#)) will capture information about injuries in deployed environments. At present, CHCSII-Theater is limited to outpatient encounters. Inpatient information will be added in future releases but this is long term and not currently in development. As the system is fielded, the Services will establish utilization policies on which deployments will use the system.

Short Term. Each of the Services currently has a medical information system for deployed environments at various stages of development. The Air Force has the Global Expeditionary Medical System (GEMS) ([Appendix M](#)), the Navy has the Shipboard Automated Medical System (SAMS) ([Appendix N](#)), and the Army will

use CHCSII-Theater. Current plans are for GEMS and SAMS to migrate into CHCSII-Theater; however, the Services may decide if, when, and how the systems will be integrated or migrated. There is a potential for disparate, inconsistent, and incomplete deployed injury data without a corporate data system with a central data repository.

Recommendation. The Working Group recommends targeting CHCSII-Theater as the corporate solution for all deployments with all Services linked under this uniform reporting system. Disparate Service-specific databases are not practical or appropriate in view of current deployment activities and the combined-Service approach to these missions.

(8) **Shipboard Injury Data.**

Long Term. The Navy currently has SAMS to collect some shipboard medical information; however, this information is not transferred to any central data repository. A future version of SAMS (SAMS 9.0) will have the capability to transfer data into the MDR. When TMIP CHCSII-Theater is activated, larger Navy ships will have the capability to use CHCSII-Theater or SAMS, but smaller ships will continue to use SAMS. TMIP Block 1 is starting initial acceptance testing and is planned for delivery in the summer of 2003. The version of SAMS scheduled for implementation in 2005-2006 will essentially be TMIP-Maritime and will have external reporting capabilities.

Short Term. The current version of SAMS has an external reporting capability; however, it is not activated. SAMS 9.0 is scheduled for release in the near future and will also have an inactivated external reporting capability.

Recommendation. The Working Group recommends the reporting function of the next version of SAMS be activated and the shipboard medical data mapped and transferred to the MDR.

(9) **Personnel Data.**

Long Term. The Defense Integrated Manpower Human Resources System (DIMHRS) ([Appendix O](#)) will provide detailed single record information on all military personnel, including the ability to track Active, Guard, and Reserve status personnel changes. The DIMHRS will also be able to track deployments and movement within theater. The goal of DIMHRS is to provide fully integrated military personnel and pay capability. The system is scheduled for initial deployment by 2004.

Recommendation. The Working Group recommends targeting DIMHRS to provide personnel information—specifically, location, demographic information, occupational specialty, activation status, deployments, permanent profiles, and

medical disability retirements. DIMHRS must incorporate the results of the DoD UIC policy development efforts.

(10) **Safety Data.**

Short Term. Safety data is the best source of detailed injury and accident information, providing complete assessments and root cause analyses. The current information system limitations for each of the Services, specifically the problems with commanders underreporting to safety centers, data inconsistencies, and the redundancies among the systems, restrict the effectiveness of the assessments and intervention and prevention programs. The same underreporting and data inconsistency problems are seen at the local level, reducing the effectiveness of the local programs in injury investigation and prevention efforts.

Recommendation. The Working Group recommends data transfer linkages between the DMSS and the Service safety centers be established as soon as possible. In addition, the Working Group recommends the MHS develop procedures to transfer medical data (i.e., hospital admissions and ambulatory visits for new injuries) from the local medical facility to the local safety office.

15. Injury Reduction Strategy.

The following injury reduction program strategies are based on extensive investigations into injury prevention best practices and supporting research, the National Safety Council report, the DoD Worker Safety Demonstration Project, the Alcoa program, and several successful DoD-specific injury reduction efforts and research.

Successful injury reduction strategies consistently include four main elements: ownership, organizational structure, an information management system, and communications. A diagram with detailed information on injury prevention best practices is provided in [Appendix P](#).

It is important to note that this injury reduction best practices model applies to both military and civilian personnel at all levels. The same basic elements and strategies apply to individual military units as well as to major command, Service, and DoD-wide efforts. The model represents an iterative process that may be initiated by any action in any one of the four main elements.

Key recommendations for each of the four elements follow.

a. **Ownership.**

- (1) **Command Commitment, Support, and Guidance.** The commander is ultimately responsible for injury reduction and prevention. Visible and demonstrated Command support and ownership of the injury prevention program is essential for success.

Recommendations.

- (a) The Working Group recommends the Secretary of Defense formally identify injury reduction as a priority and communicate his reduction goals to the Services. The Secretary of Defense oversight and periodic monitoring of progress toward injury reduction targets will reinforce and maintain command emphasis.
- (b) The Working Group also recommends that command support and commitment be further demonstrated by including injury reduction and prevention as priorities in the defense planning guidance.
- (2) **All Members of the Organization “Own” Injury Prevention.** The commander communicates and reinforces the message that everyone owns injury prevention and all are responsible for ensuring that injuries are prevented.

Recommendation. The Working Group recommends that the Secretary of Defense and commanders at all levels communicate and reinforce the message and expectation of shared ownership and responsibility.

- (3) **Accountability.** Commanders, managers, and supervisors are held accountable for injuries occurring under their Command.

Recommendation. The Working Group recommends forums to review injury reduction and prevention performance be established at all levels or integrated into regular management activities. These reviews should include a review of action plans and progress.

b. **Organizational Structure.**

Awareness and Access to Solutions (safety and health intervention and prevention programs). Although the commander owns the injury prevention program and is held accountable for injuries, the safety and health community must assist the commander in assessing data, identifying prevention targets, applying research findings, and assisting in developing and implementing intervention and prevention programs. It is the responsibility of the safety and health community to ensure commanders are aware of the safety and health resources, to ensure these resources are responsive to commanders’ needs and direction, and to maintain the highest level of safety and health expertise.

Recommendations. It is the responsibility of the safety, health, and personnel communities to coordinate efforts and cooperate to develop and implement effective injury reduction efforts. Safety, health, and personnel leadership must establish policies and guidance, clearly communicate priorities, and take action to ensure appropriate coordination and cooperation. The Working Group noted several issues with system failures to integrate across safety, health, and personnel, fragmentation, and unnecessary and costly duplication of effort.

The Services and organizations at all levels (major commands, installations, military units) must develop active integrated reduction strategies and action plans to meet reduction targets.

c. Information Management System.

- (1) **Visibility.** Commanders and all concerned at all levels must have visibility of near real-time data and metrics to monitor progress, identify and respond to injury concerns, and hold subordinates accountable. It is also essential that safety, health, and personnel share visibility of data.
- (2) **Information Management System.** The information system is potentially invaluable as a process management and culture change tool. Currently, DoD databases are constructed to store, process, and report information; however, successful injury prevention programs establish information management systems to support business practices, appropriate information flow, linkages, and action.

Recommendations: The majority of the recommendations in this report focus on DoD information systems and data gaps. In addition to the specific recommendations in previous sections, the Working Group recommends reviews and redesigns of injury management-related business practices, procedures, and guidance at all levels and the design of information management systems to support the redesigned business practices.

d. Communications.

Communication Campaign. Communication of the program, commander's guidance, activities, issues, and key messages to the entire organization is essential in promoting the program and facilitating culture change. The communications program also reinforces the information linkages and information management system by ensuring information is appropriately distributed for action.

Recommendations: The Working Group recommends the Secretary of Defense support a communications campaign to:

- Inform DoD and Service leaders and all military and civilian personnel of his injury prevention priority, commitment, and reduction targets.
- Recognize successful injury reduction efforts within DoD.
- Promote and sustain emphasis on injury reduction.
- Facilitate cultural change.

COL Mary Lopez
Chair, DoD Military Injury Metrics Working Group

Appendix A. 25 July 2002 Tasking Memo



OFFICE OF THE SECRETARY OF DEFENSE

WASHINGTON, DC 20301

JUL 25 2002

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Military Metrics Working Group

We are forming a military metrics-working group under the auspices of our Integrated Process Team to focus on measuring and managing lost time due to injuries for military personnel. The goal of the working group is to develop a consistent set of metrics, definitions, and displays for capturing these data. Attached to this memo are the initial instructions for the working group.

This group will brief its proposals to the IPT within 90 days of formation. COL Mary Lopez, United States Army Center for Health Promotion and Preventative Medicine (USACHPPM), will chair the working group.

Request each service provide personnel with expertise in military medical systems that include injuries and/or military safety metrics. Please submit the names of your representatives to Mr. Mike Ferguson, michael.ferguson@osd.mil or (703) 693-5584, by July 31, 2002.

Handwritten signature of Curtis M. Bowling.

Curtis M. Bowling
Assistant Deputy Under Secretary of Defense
Safety & Occupational Health

Handwritten signature of Joseph J. Angello, Jr.

Joseph J. Angello, Jr.
Director
Readiness Programming & Assessment

Attachments:

1. Distribution List
2. Working Group Instructions



Lost Time for Injuries IPT Members:

Army
Navy/Marine Corps (Ms. DeWitte)
Air Force (Ms. Koetz)
OASD Reserve Affairs (Mr. Spruell)
OASD Health Affairs (Ms. Embrey)
OASD Health Affairs (Mr. Ford)
DARPA
DeCA
DCAA
DCMA (Ms. Flavin)
DFAS (Mr. Hinton)
DISA
DIA (Mr. Wong)
DLSA
DLA (Mr. Connelly)
DSCA
DTRA (Mr. Reich)
MDA
NIMA (Mr. Dunbar)
NSA
DoDEA (Ms. Fitzgerald)
WHS
USA CHPPM (BG Bester)
DMDC East (Mr. Scheflen)
DMDC West (Mr. Brandewie)
CPMS (Mr. Moseley)
AAFES

Military Metrics Working Group Instructions

The goal of this working group is to develop a clear, consistent, timely measurement of the amount of time lost due to injury by military personnel. The group should limit data sources to existing systems. Resultant measure should be as similar as possible to civilian metrics.

DEFINE MILITARY METRICS

- Review the existing military metrics (Hospitalizations, Quarters, and Limited Duty):
 - Determine suitability for measuring military lost time resulting from injuries
 - Develop new metrics, if required
- Define agreed upon metrics and determine calculations

IDENTIFY EXISTING DATA SOURCES FROM MEDICAL, PERSONNEL, AND SAFETY SYSTEMS

- Determine availability, accuracy, and frequency of sources
- Evaluate and recommend best sources to support metrics

RESOLVE DATA ISSUES

- Identify data inconsistencies and gaps.
- Separate multiple clinic visits (same injury) from new injury clinic visits
- Account for accidents without clinic visits
- Capture deployed forces mishap injury data - exclude mishaps under hostile fire
- Consider representation of active duty military pending medical discharges/retirements, VA disability claims, and other like dispositions
- Research data sources that account collects days lost resulting from injuries
- Seek surrogates for causality such as disposition and treatment codes

DOD MILITARY LOST TIME FROM INJURIES SYSTEM REQUIREMENTS

- Military metrics should resemble the civilian metrics in the following aspects:
 - Frequency, "Real Time" is the goal (civilian metrics are updated every two weeks)

- Products from metric calculations should be expressed in the OSHA/ALCOA format
 - Rates per 100 personnel
 - Both number of days and incident / case rates
- Web based system:
 - Unclassified, delivers non Privacy Act information, and ".mil" restricted
 - Sorted, Collated, and Calculated displays ("Drill Down") by Commands and Locations
 - Display metrics similar to the civilian site at: <https://www.dmdc.osd.mil/ltwi/owa/ltwi>
 - Depict current period and data for last 12 months

WORKING GROUP DELIVERABLES

- Short "White Paper" detailing points of consideration and justifications for recommendations
- Decision briefing for IPT, no longer than 20 minutes
- Draft language for DoDI 6055.1 and/or 6055.7 to codify recommendations

Appendix B. Membership

Name (alpha order)	Title	Organization	E-mail Address	Phone	DSN	FAX
COL Paul Amoroso	TAIHOD Project Director	USARIEM	paul.amoroso@na.amedd.army.mil	508-233-4648	256	508-464-6024
Freya M. Arroyo	Safety Engineer	HQ, Marine Corps	arroyofm@hqmc.usmc.mil	703-695-3232 x 3212		
Jerry Aslinger			jerry.aslinger@osd.mil			
Greg Atkinson	Program Analyst	Health Affairs, HB&FP	Gregory.Atkinson@tma.osd.mil	703-681-1724 x 5206	761	703-681-3655
MAJ Michael Bell	Manager, Occupational Medicine Program	USACHPPM	Michael.Bell@apg.amedd.army.mil	410-436-2714/7975	584	410-436-4117
Paul Buckmaster		NSA	pkbuckm@nsa.gov	443-479-0625		301-688-5487
LtCol Bruce Burnham			Bruce.Burnham@kirtland.af.mil			
Kerry Dugue			Kerry.Dugue@osd.mil			
Jim Gibson	Senior Safety Manager	Ofc, Dir of Army Safety	James.Gibson@hqda.army.mil	703-601-2409	329	703-601-2417
Dr. Melissa Gliner	Decision Spt Ctr, OTSG		Melissa.Gliner@otsg.amedd.army.mil	703-681-1869		
COL Gladys Gonzalez-Nadal	Asst Director, Medical Readiness	OASD/RA (M&P)	Gladys.Gonzalez-Nadal@osd.mil	703-693-8626	223	703-695-3659
LtCol Kevin Grayson	Chief Epidemiologist	AFIERA/RSRH Army Safety Center	Kevin.Grayson@brooks.af.mil	210-536-1785	240	210-536-6841
MAJ David Hudak	Analyst	OASD/RA (M&P)	David.Hudak@safetycenter.army.mil			
Virginia M. Hyland		Naval Safety Center	virginia.hyland@osd.mil	757-444-3520 x 7168		
Al Jacka			Aiacka@safetycenter.navy.mil			
Dr. Bruce Jones	Manager, Injury Prevention Program	USACHPPM	Bruce.Jones@apg.amedd.army.mil	410-436-1008	584	410-436-5449
Greg Knapp		CPMS/ICUC	greg.knapp@cpms.osd.mil	703-696-1993		
LTC Jon Larsen	Division Chief, Research & Analysis	Army Safety Center	Jon.Larsen@safetycenter.army.mil			

Name (alpha order)	Title	Organization	E-mail Address	Phone	DSN	FAX
Al Lillibridge	Deputy Director, Safety Division	CMC (SD)	LillibridgeAR@hqmc.usmc.mil			
COL Mary Lopez (CHAIR)	Ergonomics Program Manager	USACHPPM	mary.lopez@apg.amedd.army.mil	410-436-3928	584	410-436-8881
MAJ Pearlina McKenzie-Garner	Command Surgeon	DTRA	pearline.mckenzie-garner@dtra.mil	703-767-4972	427	
Major Jacqueline Melton	Military Pay Analyst	DFAS	Jacqueline.Melton@dfas.mil	703-607-5113		
John Phillips	C, AF Safety Policy & Plans Manager, Medical Surveillance Program	AF/SEP	John.Phillips@kafb.saia.af.mil	505-846-0728	246	
LTC Mark Rubertone	Preventive Medicine Officer	USACHPPM	Mark.Rubertone@na.amedd.army.mil	202-782-0471	662	
CAPT Ken Schor		HQ Marine Corps		703-614-4478		
John Scott		Naval Safety Center	Jscott@safetycenter.navy.mil	757-444-3520 x 7184	564	
Col Charles R. Scoville	Chief, Physical Therapy	OTSG	Charles.Scoville@otsg.amedd.army.mil	703-681-3117	761	
Ralph G. Slighter		DCPMS, ICUC	ralph.slighter@cpms.osd.mil	703-696-1992		
Col Forrest Sprester	Chief of Staff	SAF/IEE	Forrest.Sprester@pentagon.af.mil	703-767-1016	227	
CAPT William R. Stover	OSH Branch Head	BUMED (M3F42))	WRStover@us.med.navy.mil	202-762-3491	762	202-762-3491

Appendix C. Working Group Parameters

Military Injury Metrics Working Group Brainstorm Session, 21 August 2002

- Unintentional Injuries to include DNBI (interested in NBI portion; exclude disease) (includes traumatic, overuse, heat, cold, nerve entrapments, carpal tunnel) (look at other exclusions in DoDI 6055.7)
- Define injuries and what it includes (i.e., hospitalizations, quarters, limited duty)
 - Lost work days
 - Limited duty
 - Injury without time impact
- Does not include deaths or hostile fire situations
 - Could be a recommendation in the white paper to include deaths.
 - Deaths are already captured quite well.
- Use existing databases, but can address systems on the horizon.
- Need two or three key metrics to be consistent/ standardized among Services.
- Need to be timely and comparable to civilians (every 2 weeks).
 - Timeliness should be dependent on target audience.
- Must be accurate and objective so that it won't be ignored.
- Target audience: The Secretary of Defense so he can keep visibility on injuries.
 - Service Chiefs, other Executives and commanders
 - Could extend to O5 level
 - Service Safety Centers
- End product must be web-based.
- Caution: Unforeseen consequences in terms of military activities and reporting causing domino effects.
- Identify data that is missing.
- Concerned about comparing civilian to military metric.
- Easy to understand.
- Do we need to address mental trauma as a result of injury? Currently focus on Class B and C injuries. Guideline: Has to be proactive, preventive “thing” to prevent the mental trauma.

- Address repeat and pre-existing conditions in white paper. Need to be defined.
- Identify causes (e.g., on versus off duty).
 - Per Mike, make this a parking lot issue for future expansion of system.
 - Work this concern into the white paper.
- AS we move to modify 6055.7, don't mess up the mishap prevention.
- Cost is not on the radar screen at this time. Work this concern into the white paper.
- Leading indicators is not on the radar screen and could be address in the white paper.
- In the white paper, address on duty vs off duty injuries
 - The decision point: could we or should we do anything about it
- Count from time of injury to when the Service is no longer paying.
- Keep in mind the reserves/NG and how they should be counted. Mike said focus on active duty only and bring in reserves/NG in future model.
- Deployed forces. Mike will get clarification on deployed forces being reported (reporting of classified numbers and locations?).
- Recommend following: death, Physical Evaluation Board (PEB) and limited duty disposition (LDD) data to make impact on workforce. Follow the economics.
- Make clear the differences between the safety personnel pyramid and medical personnel pyramid.
- Fidelity of this system will require more resources; won't get something for nothing.
- Caution from Ralph
 - 2 week reporting period – not binding to military – it is the way civilians are being paid.
 - Current medical reporting system does not capture difference between on and off duty injuries.

Appendix D. Major Commands

Air Force Major Commands

- Air Combat Command (ACC)
- Air Education & Training Command (AETC)
- Air Force Materiel Command (AFMC)
- Air Force Reserve Command (AFRC)
- Air Force Space Command (AFSPC)
- Air Force Special Operations Command (AFSOC)
- Air Mobility Command (AMC)
- Air National Guard (ANG)
- Pacific Air Forces (PACAF)
- United States Air Forces Europe (USAFE)

Army Major Commands

- 8th Army
- Army Central Command (ARCENT)
- Army Materiel Command (AMC)
- Army Test and Evaluation Command (ATEC)
- Criminal Investigation Command (CID)
- Department of the Army Staff (DA STAFF)
- Forces Command (FORSCOM)
- Intelligence and Security Command (INSCOM)
- Medical Command (MEDCOM)
- Military District of Washington (MDW)
- Military Traffic Management Command (MTMC)
- National Guard Bureau (NGB)
- Training and Doctrine Command (TRADOC)
- U.S. Army Corps of Engineers (USACE)
- U.S. Army Pacific Command (USARPAC)
- U.S. Army South (USARSO)
- U.S. Army Space and Missile Defense Command (USASMDC)
- U.S. Army Special Operations Command (USASOC)

Navy Major Commands

- Commander, Naval Air Force, US Atlantic Fleet (COMNAVAIRLANT)
- Commander, Naval Air Force, US Pacific Fleet (COMNAVAIRPAC)
- Commander, Naval Surface Force, US Atlantic Fleet (COMNAVSURFLANT)
- Commander, Naval Surface Force, US Pacific Fleet (COMNAVSURFPAC)
- Commander, Submarine Force, US Atlantic Fleet (COMSUBLANT)
- Commander, Submarine Force, US Pacific Fleet (COMSUBPAC)

Marine Corps Forces Command

Marine Corps Combat Development Command (MCCDC)
Marine Corps Forces Command Atlantic (MARFORLANT)
Marine Corps Forces Command Pacific (MARFORPAC)
Marine Corps Forces Reserve (MARFORRES)
Marine Corps Recruiting Command (MCRC)
Materiel Command (MATCOM)

Appendix E. ICD-9-CM Code List

Categorization of Anatomical Region (ICD9-CM codes)

Head and neck

722.0 722.71 723.1 723.4 800 801 802 803 804 805.0 805.1 806.0 806.1 807.5 807.6 830 839.0
839.1 847.0 848.0 848.1 848.2 850 851 852 853 854 870 871 872 873 874 900 910.0 910.1 910.2
910.3 910.6 910.7 910.8 910.9 918 920 921 925 930 931 932 933 935.0 940 941 947.0 950 951
952.0 953.0 954.0 957.0 959.0

Shoulder and arm

354.1 354.2 354.3 718.01 718.02 718.03 718.11 718.12 718.13 718.21 718.22 718.23 718.31
718.32 718.33 718.81 718.82 718.83 718.91 718.92 718.93 719.01 719.02 719.03 719.11 719.12
719.13 719.41 719.42 719.43 726.0 726.1 726.2 726.3 727.61 727.62 733.11 811 812 813 818
831 832 840 841 880 810 881.00 881.01 881.10 881.11 881.20 881.21 887 903.0 903.1 912.0
912.2 912.3 912.6 912.7 912.8 912.9 923.0 923.1 927.0 927.1 943 953.4 955.0 955.1 955.2 955.3
955.4 955.5 955.7 955.8 955.9 959.2

Hand and wrist

354.0 718.04 718.14 718.24 718.34 718.84 718.94 719.04 719.14 719.44 726.4 727.63 727.64
733.12 814 815 816 817 833 834 842 881.02 881.12 881.22 882 883 885 886 903.4 903.5 914.0
914.1 914.2 914.3 914.6 914.7 914.8 914.9 915.0 915.1 915.2 915.3 915.6 915.7 915.8 915.9
923.2 923.3 927.2 927.3 944 955.6 959.4 959.5

Leg

718.05 718.15 718.25 718.35 718.85 718.95 719.05 719.15 719.45 726.5 727.65 733.14 733.15
733.93 808.0 808.1 820 821 823 835 843 844.3 890 897 904.0 904.1 904.2 904.3 904.5 924.0
924.10 924.4 924.5 924.6 924.7 924.8 924.9 928.0 928.11 928.8 928.9 945.00 945.04 945.06
945.09 945.10 945.14 945.16 945.19 945.20 945.24 945.26 945.29 945.30 945.34 945.36 945.39
945.40 945.44 945.46 945.49 945.50 945.54 945.56 945.59 956 959.6

Knee

717 718.26 718.36 718.86 719.06 719.16 719.46 726.6 727.66 822 836 844.0 844.1 844.2 845
924.11 928.11 945.05 945.15 945.25 945.35 945.45 945.55

Ankle and foot

718.07 718.17 718.27 718.37 718.87 718.97 719.07 719.17 719.47 727.67 727.68 726.7 733.94
824 825 826 837 838 845 892 893 895 896 904.6 917.0 917.1 917.2 917.3 917.6 917.7 917.8
917.9 924.2 924.3 928.2 928.3 945.01 945.02 945.03 945.11 945.12 945.13 945.21 945.22
945.23 945.31 945.32 945.33 945.41 945.42 945.43 945.51 945.52 945.53

Chest, back, and abdomen

720.2 721.7 722.1 722.72 722.73 724.2 724.3 724.4 733.13 805.2 805.3 805.4 805.5 805.6 805.7
806.2 806.3 806.4 806.5 806.6 806.7 807.0 807.1 807.2 807.3 807.4 808.2 808.3 808.4 808.5
808.8 808.9 809 839.2 839.3 839.41 839.42 839.51 839.52 839.61 839.71 846 847.1 847.2 847.3
847.4 847.9 848.3 848.4 848.5 860 861 862 863 864 865 866 867 868 869 875 876 877 878
879.0 879.1 879.2 879.3 879.4 879.5 879.6 879.7 901 902 911.0 911.1 911.2 911.3 911.6 911.7
911.8 911.9 922 926 934 935.1 935.2 936 937 938 939 942 947.1 947.2 947.3 947.4 952.1
952.20 952.3 952.4 953.1 953.2 953.3 953.5 954.1 954.8 954.9 959.1

Environmental

692.71 692.76 692.77 910.4 910.5 911.4 911.5 912.4 912.5 913.4 913.5 914.4 914.5 915.4 915.5
916.4 916.5 917.4 917.5 919.4 919.5 990 991 992 993 994

Unspecified

718.00 718.08 718.09 718.10 718.18 718.19 718.20 718.28 718.29 718.30 718.38 718.39 718.80
718.88 718.89 718.90 718.98 718.99 719.00 719.08 719.09 719.10 719.18 719.19 719.40 719.48
719.49 722.2 722.70 726.8 726.9 727.2 727.3 727.60 727.69 728.83 729.2 733.10 733.16 733.19
733.95 805.8 805.9 806.8 806.9 819 827 828 829 839.40 839.49 839.50 839.79 839.8 839.9
844.8 844.9 848.8 848.9 879.8 879.9 884 891 894 903.2 903.3 903.8 903.9 904.4 904.7 904.8
904.9 913.0 913.1 913.2 913.3 913.6 913.7 913.8 913.9 916.0 916.1 916.2 916.3 916.6 916.7
916.8 916.9 919.0 919.1 919.2 919.3 919.6 919.7 919.8 919.9 923.8 923.9 924.4 924.5 924.8
924.9 927.8 927.9 928.8 928.9 929 946 947.8 947.9 948 949 952.8 952.9 953.8 953.9 957.1
957.8 957.9 959.3 959.7 959.8 959.9

Appendix F. Injury Definitions

Injury: A traumatic wound or other condition of the body caused by external force or deprivation (drowning, suffocation, exposure, cold injury, and dehydration), including stress or strain. The injury is identifiable as to time and place of occurrence and member or function of the body affected, and is caused by a specific event or incident or series of events or incidents in a single day or work shift. (DODI 6055.7 E2.1.24)

Illness and/or Disease: A non-traumatic physiological harm or loss of capacity produced by systemic; continued or repeated stress or strain; exposure to toxins, poison, fumes, etc., or other continued and repeated exposures to conditions of the environment over a long period of time. For practical purposes, an occupational illness and/or disease is any reported condition that does not meet the definition of injury. (DODI 6055.7 E2.1.23)

Class A Accident: The resulting total cost of damages to Government and other property in an amount of \$1 million or more; a DoD aircraft is destroyed; or an injury and/or occupational illness results in a fatality or permanent total disability (DODI 6055.7 E7.1.2.2). (DODI 6055.7 E2.1.3.1)

Class B Accident: The resulting total cost of damage is \$200,000 or more, but less than \$1 million. An injury and/or occupational illness results in permanent partial disability (DODI 6055.7 E7.1.2.3); or when three or more personnel are hospitalized for inpatient care (which, for accident reporting purposes only, does not include just observation and/or diagnostic care) as a result of a single accident. (DODI 6055.7 E2.1.3.2)

Class C Accident: The resulting total cost of damage is \$20,000 or more, but less than \$200,000; a nonfatal injury that causes any loss of time from work beyond the day or shift on which it occurred; or a nonfatal occupational illness or disability that causes loss of time from work or disability at any time (lost time case). Components may collect a minimal amount of data for off-duty military lost time injuries. (DODI 6055.7 E2.1.3.3)

Military: All U.S. military personnel on active duty or Reserve status under the provisions of 10 U.S.C. National Guard personnel under the provisions of 32 U.S.C.; Service Academy cadets; Reserve Officer Training Corps cadets when engaged in directed training activities; foreign national military personnel assigned to the DoD Components. (DODI 6055.7 E2.1.9.2)

Lost Time Case: A nonfatal traumatic injury that causes any loss of time from work beyond the day or shift it occurred, or a nonfatal non-traumatic illness and/or disease that causes disability at any time. (DODI 6055.7 E2.1.27)

Appendix G. Justification Data for 30 Day Threshold

Active Duty Injury Counts,* by Service, CY 2001

	Total	Incident event**		
		30 days	60 days	90 days
All injuries				
Army	926,977	591,943	563,233	553,456
Navy	350,024	221,763	212,580	209,658
Air Force	418,235	253,531	243,541	240,442
Marines	242,425	155,495	148,977	147,070
Injuries resulting in lost duty time (bed days or quarters)				
Army	17,160	14,127	13,928	13,826
Navy	7,312	6,149	6,046	6,012
Air Force	4,522	3,742	3,675	3,648
Marines	3,524	2,923	2,894	2,883
Injuries resulting in limited duty				
Army	411,392	231,838	218,314	214,168
Navy	65,699	45,780	43,834	43,278
Air Force	40,028	26,708	25,553	25,246
Marines	64,067	43,408	41,466	40,904

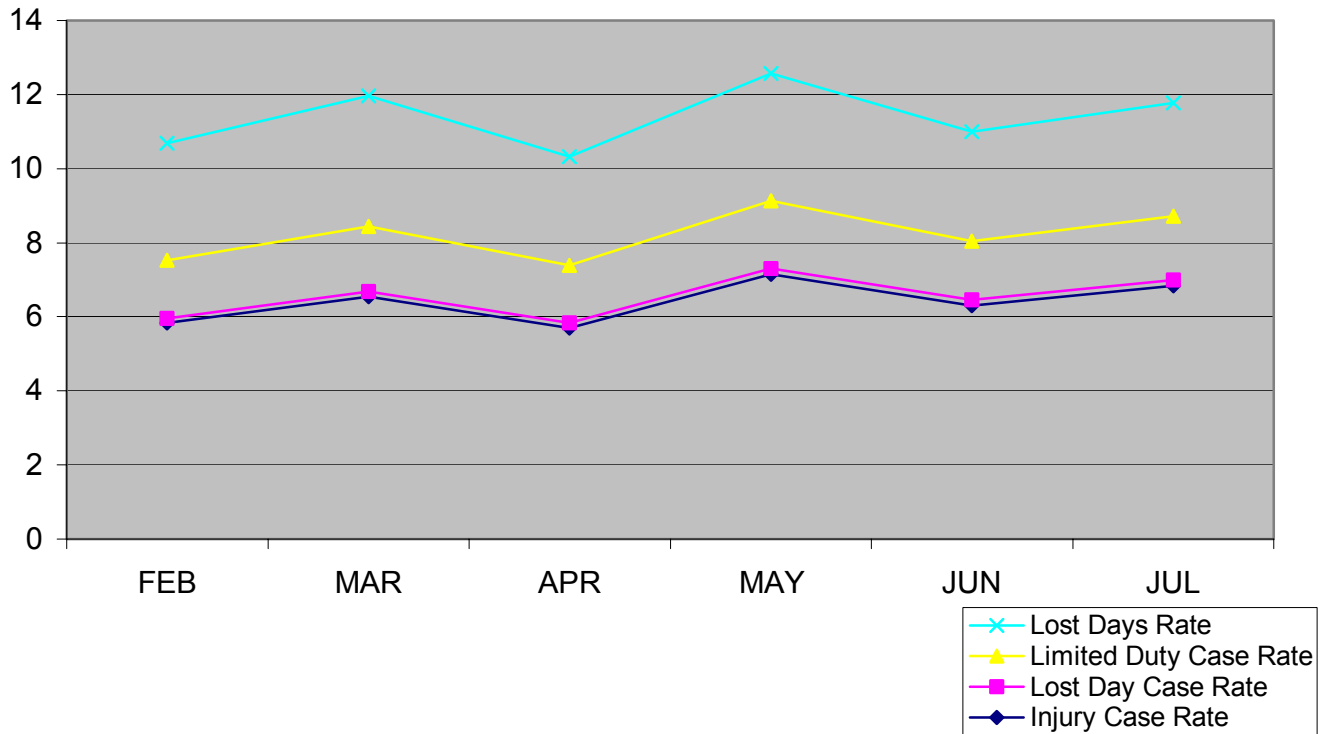
*All inpatient and outpatient (AMSA defined) injury visits in CY 2001.

**Duplicates per person per 3 digit code are removed within 30/60/90 days.

Appendix H. Sample Web Page with All Four Metrics

Level: Department of Defense

*Rate per 100 service members



Level: Department of Defense

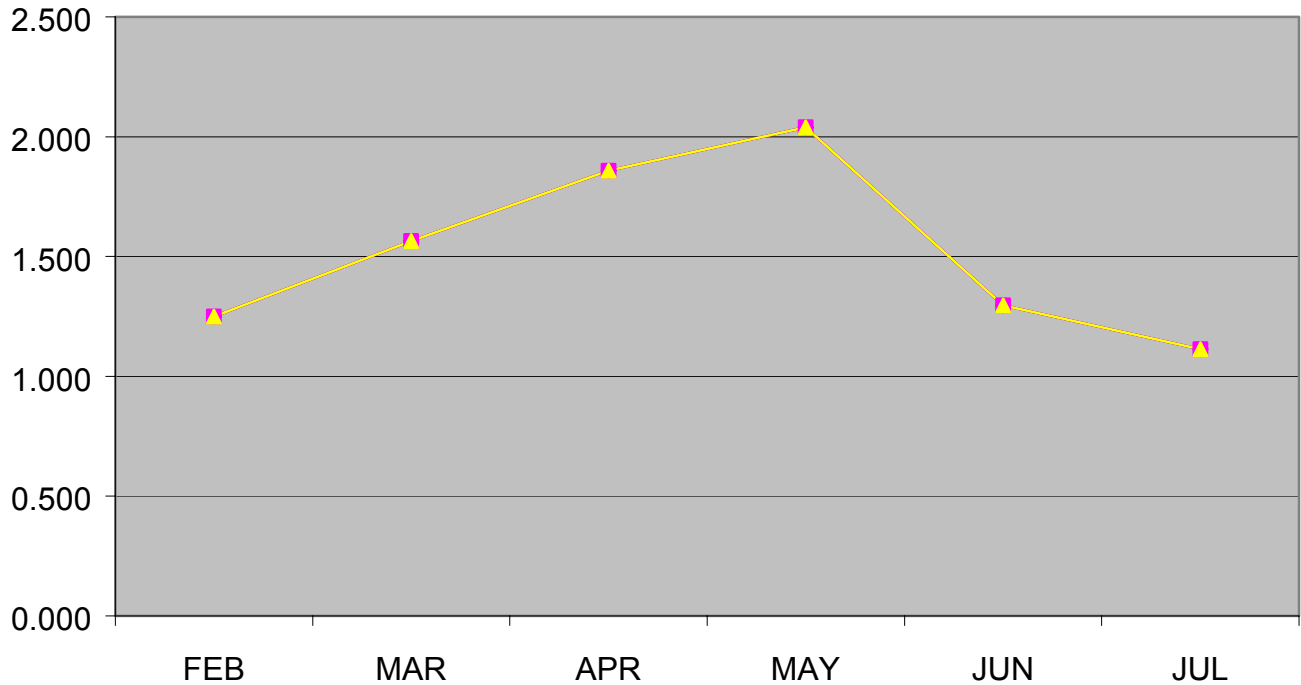
	FEB	MAR	APR	MAY	JUN	JUL
Population	1,373,591	1,363,769	1,382,548	1,387,348	1,391,815	1,397,191
Injury case count	80,274	89,147	78,831	99,086	87,721	95,440
Injury case rate	5.84	6.54	5.70	7.14	6.30	6.83
Lost day injury case count	1,700	1,957	1,917	2,244	2,181	2,221
Lost day injury case rate	.12	0.14	0.14	0.16	0.16	0.16
Limited duty injury case count	21,585	24,167	21,280	25,433	21,923	24,167
Limited duty injury case rate	1.57	1.77	1.54	1.83	1.58	1.73
Lost days count	43,311	47,848	40,834	47,545	41,155	42,645
Lost days rate	3.15	3.51	2.95	3.43	2.96	3.05

Appendix I. Sample DNBI Web Page

[Drill down by major deployment and roll up to all deployments]

Level: Bosnia Deployment - 2002

*Rate per 100 service members



Level: Bosnia Deployment - 2002

	FEB	MAR	APR	MAY	JUN	JUL
Total Injury Rate	1.249	1.564	1.858	2.039	1.296	1.113
Heat/Cold Injury Rate	.01	.00	.012	.012	.01	.013
Recreational Sports Injury Rate	.186	.171	.341	.623	.520	.442
MVA Injury Rate	.01	.018	.000	.012	.01	.000
Work / Training Injury Rate	.082	.182	.306	.354	.111	.266
“Other” Injury Rate	.786	.913	.882	.904	.438	.329
Ophthalmologic Injury Rate	.175	.280	.317	.134	.207	.063

Appendix J. Cost Calculation Formulas and Sample Web Page Report

Note: This proposal is only addressing lost time, limited duty and no lost time cases. Permanent partial disability, permanent total disability and fatality costs remain to be determined.

The proposed formulas are presented below. Note that these costs would be presented by the drill down categories (installation, major command, injury category). The costs would be categorized by rank.

No Lost Time or Limited Duty Case

$$\frac{[(\text{Daily salary by rank} \times .33) + \text{average clinic cost}]}{\text{x total number of visits}}$$

Note: We would assume 1/3 day of lost time to complete medical care and associated requirements.

Note: The medical database would provide the actual number of clinic visits for the time period (e.g., 30 days) for all military who fall into the ‘no lost time or limited duty’ category.

Note: When the medical databases can provide the actual number of limited days, recommend creating a new cost category.

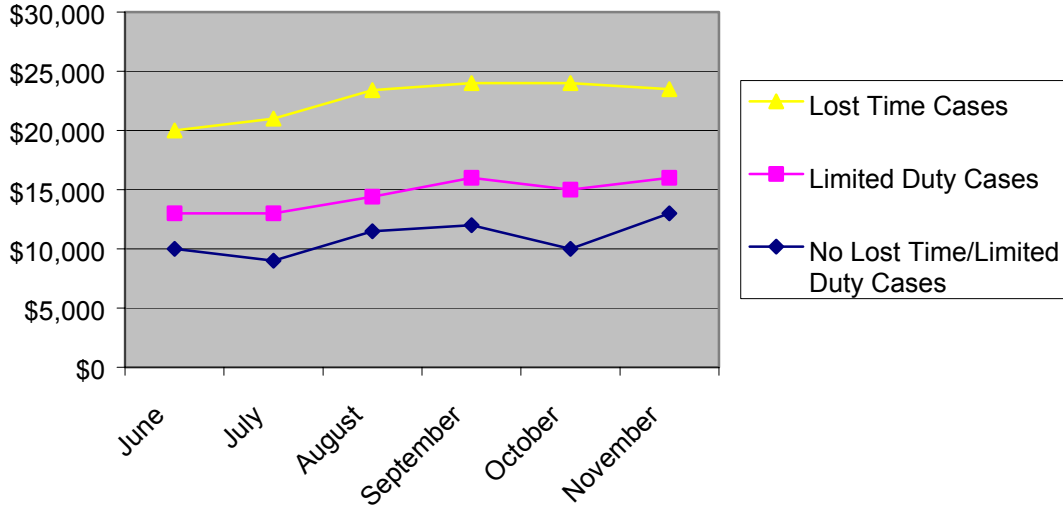
Lost Time Case

$$\begin{aligned} & (\text{Daily salary by rank} \times \text{number of lost days for rank}) \\ & + (\text{average clinic cost} \times \text{number of visits}) \\ & + (\text{average hospital cost per day} \times \text{number of bed days}) \end{aligned}$$

Note: Add qualifier: “Lost days due to convalescent leave are not included in the cost calculation. Add $\$(\text{Daily salary by rank}) \times \text{the number of convalescent leave days if known.}$ ”

Cost Report

Graphic – Cost per 100 troops by lost time, limited duty, no lost time/limited duty cases



Data Table – By drill down category for the time period. Also could track over time.

	Number of cases	Rate per 100	Cost per 100 personnel	Average cost per case	Total cost
Lost Time					
Limited Duty					
No Lost Time/ Limited Duty					

Appendix K. Composite Health Care System II (CHCSII)

Composite Health Care System II: The Military Computer-Based Patient Record

Background:

- The Composite Health Care System II (CHCS II) is the Military's electronic Computer-based Patient Record, a clinical information system that will generate, maintain, and provide secure online access to a comprehensive and legible health record. In September 2000, a review body comprised of the four Service Vice Chiefs and the Vice Chairman of the Joint Chiefs of Staff approved the proposed performance parameters for CHCS II.

Key Points:

- Strongly promotes military medical readiness by supporting uniform, high-quality health promotion and health care services to Military Health Service (MHS) beneficiaries worldwide.
- Is a key enabler for Force Health Protection and Population Health Improvement, two cornerstones of military medicine; also, makes deployed Service members' health care information available for analysis and action.
- Functional capabilities of CHCS II include:
 - ◆ Allows users to view patient demographics, work status information, and appointment status
 - ◆ Allows documentation of the exam through the use of point and click templates, and cut and paste functions
 - ◆ Speeds order entry: laboratory, radiology, pathology tests, medications, education and consults
 - ◆ Retrieves results: laboratory, pathology, and radiology; displays abnormal results in a visually distinct manner
 - ◆ Alerts users when priority results require action
 - ◆ Identifies potential drug allergies and other problems
 - ◆ Tracks and stores allergy information
 - ◆ Tracks consultations
 - ◆ Displays medical problem lists including description, status, onset, and source.
 - ◆ Allows users to view, add, and modify patient immunization data
 - ◆ Automates tracking and viewing of patient wellness reminders and schedules for health screening, prevention, and safety counseling
 - ◆ Captures self-reported data on satisfaction, pre and post deployment information, Health Evaluation Assessment Report, Occupational Health and others
 - ◆ Provides users with need-to-know access to patient record; audit trails identify and record actions by users

- To be used in all Army, Navy, and Air Force fixed medical facilities, on-board ships, and in deployed medical facilities.
- Complies with all DoD Information Technology Architecture and Information Security Requirements.
- Being tested by users at Naval Medical Center Portsmouth, 1ST Medical Group at Langley Air Force Base (AFB), 4th Medical Group at Seymour-Johnson AFB, and McDonald Army Community Hospital at Ft. Eustis, VA.
- Formal DoD operational test and evaluation, required prior to worldwide implementation decision, is scheduled to occur in June 2002.
- Strong members of the CHCS II team include Intēgic Corp., Science Applications International Corp., International Business Machines, Problem Knowledge Couplers Corp., Oracle Corp., Northrop Grumman Corp., Business Objects S.A., and Medicomp Systems Inc.

Appendix L. Theater Medical Information Program (TMIP)

Theater Medical Information Program (TMIP)

KEY MESSAGES:

- An information technology system that supports the medical readiness of deployed combat forces anywhere, anytime, and in support of any mission. It brings an integrated suite of automated medical information systems to the battlefield in direct support of the warfighter.
- Its overarching “fight like you train” philosophy reduces the fog and friction of deployed operations by maintaining the same look, feel, and function found in familiar in-garrison applications. This reduces training requirements, reduces errors, and improves casualty care.

FACTS:

- Includes multiple Command and Control, Medical Logistics, and Health Care Delivery capabilities all designed to enhance the flexibility of commanders, right-size the logistics footprint of deployed medical operations, improve the survivability the sick and injured, and multiply the overall effectiveness of U.S. military power.
- Serves as the medical component of the Global Combat Support System.
- Integrates existing medical information systems to capture the deployed patient’s medical record; this same information is then accessible both at home and abroad.
- Aggregates medical information from all levels of care supporting situational awareness and preventive medicine needs for operational forces.
- Medical data generated at battlefield locations is transmitted to a central theater database, which can then be viewed for command and control of the theater medical battlefield.
- Biological and chemical exposures can be identified as a result of trend analysis.
- Tracks and reports patient location during evacuation from theater to stateside hospital.
- TMIP functional capabilities include:
 - ◆ Medical logistics
 - ◆ Immunization tracking
 - ◆ Structured text clinical encounter
 - ◆ Battle injuries and battlefield disease
 - ◆ Post-deployment surveys
 - ◆ Occupational Health/radiation exposure
 - ◆ Lab results
 - ◆ Status reporting
 - ◆ Blood management
 - ◆ Medical records
 - ◆ Symptomology
 - ◆ Sick call and physical exams
 - ◆ Consults
 - ◆ Logistics management
 - ◆ Disease and injury coding
 - ◆ Automated medical reference/library
- The integrated suite of TMIP capabilities includes:
 - ◆ Composite Health Care System (CHCS) II – Theater
 - ◆ Defense Medical Logistics Standard Support (DMLSS) System
 - ◆ Shipboard Automated Medical System (SAMS)
 - ◆ Medical Surveillance System (MSS)
 - ◆ Medical Analysis Tool (MAT)
 - ◆ Defense Blood Standard System (DBSS)
 - ◆ TRANSCOM Regulating and Command & Control Evacuation System (TRAC²ES)
- Architecture complies with all DoD IT Architecture and Information Security Requirements.

- Follows an evolutionary acquisition strategy through the release of blocks of functional capability.
- Successful user testing has been completed at Fort Sam Houston, Texas and in Thailand during Exercise Cobra Gold. Additional user testing and evaluation will be performed during the summer of 2002 in Exercise Millennium Challenge, a Joint Forces Command exercise. Initial Operational Test & Evaluation is scheduled for 2002.

LTC (P) Mark Lyford, USA

TRICARE Management Activity/Information Management Technology and Reengineering

(703) 379-0138

20 February 2002

Appendix M. Air Force Global Expeditionary Medical System (GEMS)

What is the Global Expeditionary Medical System (GEMS)?

GEMS can provide an integrated biohazard surveillance and detection system that will keep a global watch over our forces. The GEMS incorporates an electronic medical record as a basis for real-time data analysis, and will serve as the foundation for an Air Force wide integrated surveillance and medical command and control (C2) network. Through GEMS, data collection, assessment, and trend analysis are automatically performed at the operational (unit), tactical (base), and strategic (U.S.-based centers of excellence) levels. Individual specific analysis will provide quick patient diagnosis and treatment. With ongoing site and regional data review, population-specific analysis will pick up disease trends to provide an early warning of outbreaks or biological attacks.

The GEMS has four distinct but interconnected components or modules.

- The Patient Encounter Module (PEM) collects and creates the electronic medical record.
- The Theater Occupational Module (TOM) documents industrial and environmental exposures.
- The Public Health Deployed Module (PHD) documents all preventive medicine related information and exposures.
- The Theater Epidemiological Module (TEM) takes the data collected by the other modules, then provides powerful but "easy-to-use" analysis tools to enable the users to make fact-based decisions regarding force protection, medical condition or events, occupational and environmental exposure, environmental impact, and disease management.

Appendix N. Navy Standard Automated Medical System (SAMS)

Background

SAMS is a versatile, automated medical support application developed to improve naval health care by reducing the administrative burden on health care providers. SAMS is currently in use at over 1400 sites in the Navy and Marine Corps, both ashore and afloat. SAMS functionally tracks the medical and dental readiness of operational units such as SEAL Teams, Construction Battalions (Seabees), Marine Expeditionary Units, ships, and submarines. In addition, this application is in use at 175 Medical Treatment Facilities and Clinics, Military Sealift Command vessels and will be implemented in Coast Guard clinics and vessels in FY03. Future expansion to Naval Reserve forces is expected as well in the FY03-FY04 timeframe.

Key Points

Individual and Unit Medical Readiness Tracking - This feature allows medical department personnel to track both the medical and dental readiness of an individual or the collective medical readiness status of an entire unit or command.

SAMS consists of the following modules:

- **Master Tickler** - This module tracks demographic, physical examinations (routine, occupational and special duty), women's health maintenance examinations, allergies, immunization tracking, vision, hearing, dental readiness, laboratory results, and sexually transmitted diseases for crewmembers or visitors. Master Tickler includes interfaces to DEERS for immunization tracking and the Navy HIV Testing Program.
- **Medical Encounters** - Documents and reports all health care encounters with the medical department, including: routine sick call visits using the SOAP (Subjective, Objective, Assessment, Plan) note format, accident and injury reporting, follow-up examinations/visits, consultations and referrals, vital sign monitoring/tracking, PRP status and patient disposition. Utilizing the NDRS function, report incidences of infectious communicable disease and illness to the appropriate agencies. These reports include Medical Events Reports and weekly DNBI Reports.
- **Radiation Health** - Documents and reports all radiation exposure data in accordance with the requirements of the Navy Radiation Health Protection Program. This module supports the exchange of dosimetry data with the Naval Dosimetry Center in Bethesda, MD via a bi-directional interface.
- **Environmental Health** - This module includes heat stress monitoring, potable water testing, and pest control. This module is augmented by the SAMS Environmental Health Module for Palm™.

- Supply Management - Supports the inventory management of medical material and pharmaceuticals. Specific support provided for AMMAL/ADAL inventory management. Users can requisition, store, distribute, and track all medical materials. The Supply Management module produces a variety of inventory reports, maintains the OPTAR log, and interfaces with various shipboard programs.
- Training Management - Tracks both crew and medical department personnel training. This module is customized by the user to suit the needs of the command.
- System Management - Maintains command specific information, on-line table maintenance, user customization, and system utilities.

Special Features

- Women's Health Monitoring - A specific section in the Master Tickler module tracks the status of women's health maintenance examinations, including mammography, gynecological examinations, PAP testing/results, and birth control information. Obstetrical information includes pregnancy testing/results, gravida, para, and gestation information.
- Common Access Card - SAMS interfaces with the joint services Smart Card currently used by the U.S. Navy. This capability allows users to read/write data to the Smart Card.
- Transfer Diskette - When a service member transfers to another duty station, a transfer diskette can be generated and forwarded with the member's medical record to their new command. The diskette includes all information on that member that is currently maintained in SAMS. The gaining command simply imports the data from the disk and changes the demographic data as needed. This eliminates redundant data entry.
- Dental Readiness – SAMS Dental data includes the patient's dental classification, assessment, treatment plan, and other dental readiness information.

System Interfaces

SAMS interfaces include:

- Defense Eligibility Enrollment System (DEERS)
- Navy HIV Testing Program (download program info only)
- Navy Dosimetry Center
- Naval Health Research Center Database (download program info only)
- DoD DNA Repository Program (download program info only)
- Shipboard SNAP I, SNAP II, and R-Supply systems (download program info only)
- Joint Services Smart CAC
- SAMS Environmental Health, Supply and Immunization Module for Palm™

Appendix O. Defense Integrated Military Human Resources System (DIMHRS)

Executive Summary

The Operational Requirements Document (ORD) for the Defense Integrated Military Human Resources System (Personnel and Pay) (DIMHRS (Pers/Pay)) is offered as a practical and useful tool to those managers responsible for defining system capabilities needed to satisfy the DIMHRS (Pers/Pay) mission need. The Mission Need Statement (MNS), dated February 24, 1998, specifically outlines the mission of DIMHRS (Pers/Pay). The MNS lists the following five major problem areas that will be resolved:

- CINCs do not have access to accurate or timely data on personnel needed to assess operational capabilities.
- OSD and joint managers and other users of data are hindered by the lack of standard data definitions and cannot make necessary comparisons across Services.
- Reservists who are called up are sometimes “lost” in the system; impacting their pay, their credit for service, and their benefits.
- Active duty personnel (and reservists) are not tracked into and within the theater.
- Linkages between the personnel and pay functions differ among the Services resulting in multiple data entry, complex system maintenance, reconciliation workload, and pay discrepancies.

This ORD presents the background that has led to the need for the development of a software application that operates in a common operating environment using common data defined by common business practices where practical. DIMHRS (Pers/Pay) will provide personnel and pay support throughout the life cycle of a Service member's career. This means that it will provide this support across the full operational spectrum -- peacetime and war, through mobilization and demobilization, deployment and redeployment, in theaters of operation and at home bases, capturing and maintaining accurate and timely data. In order to provide this support, it will necessarily collect data on every aspect of the Service member's career. It will retain and maintain that data in a single, comprehensive record of service that will be available to the Service member. The data and information will also be available (through interfaces and/or direct access) to the Service personnel chiefs, CINCs, military personnel and pay managers, and authorized users in OSD and other Federal Agencies.

The Defense Finance and Accounting Service (DFAS) will continue to have responsibility for the computation and disbursement of pay. The DIMHRS (Pers/Pay) pay module will provide a new capability for calculating pay. Since DIMHRS (Pers/Pay) will support pay management as well as personnel management, representatives from DFAS and the Service finance organizations as well as representatives from the personnel community are participating in the process of defining detailed requirements for DIMHRS (Pers/Pay).

The overall goal for DIMHRS (Pers/Pay) is to provide fully integrated military personnel and pay capability for all Components of the Military Services of the Department of Defense with an initial operating capability by 2003. The program's major objective is to enhance mission support to the war fighter and Service Departments by eliminating or reducing data collection burdens, solving operational problems, conserving resources, improving delivery of services, and enhancing readiness. The highest priority of DIMHRS (Pers/Pay) should be to provide timely, accurate, and easily understood functional information for the Service members, commanders in the field, and Service headquarters. The system should be a knowledge-based system that incorporates policy rules to ensure the user is not required to make policy determinations. An overarching goal of DIMHRS (Pers/Pay), due to new operational mission requirements, will be to support all-Service information on individuals for joint and multi-service units. The commanders of these units should have the ability to access personnel information on all members assigned to their units regardless of Service. The system must be robust enough to meet changing operational concepts and requirements to the individual (vice unit) level for mobilization, activation, contingency operations, assignment actions, etc. Military personnel processes have been analyzed to ensure that DIMHRS (Pers/Pay) addresses major deficiencies in the delivery of military personnel and pay services. The deficiencies identified are the direct result of the inability of myriad current systems with multiple, complex interfaces to fully support current business process requirements. These deficiencies continue to impact operations and the overall quality of service provided to Service members, and must be corrected to ensure that they receive timely and accurate personnel and pay support to include: correct pay, accurate credit for service, and appropriate benefits.

The high-level requirements have been validated through business process reengineering, involving all Services and Components, for the full scope of the military personnel life cycle. Business process reengineering will produce changes to both policy requirements and processes within the personnel and pay functional arena. The military personnel policy experts in OSD, the Joint Staff and the Military Service Departments will review policy changes for personnel policy implications and validation. DIMHRS (Pers/Pay) will support the Title 10 and Title 32, USC, responsibilities and requirements of the individual Military Service Departments. Shortcomings in the legacy systems can be summarized as follows:

- Personnel and Pay Inefficiencies. The lack of integration between personnel and pay functions and processes which provide data to the Defense Finance and Accounting Service (DFAS) for pay computation and disbursement causes delays and errors in pay (both underpayments and overpayments), the need for data reconciliation and correction, losses due to overpayments, and costs to recoup overpayments. On average, the Defense Joint Military Pay System (DJMS) input error range is between five and fifteen percent, depending on the proficiency of field site personnel. This error range includes both accuracy and timeliness of submissions. Late inputs create customer service delays and increase the need for complex retroactive computations and debt processing. A recent DFAS study of one Service's input indicates that eight percent of entitlement transactions are transmitted to DFAS more than six months after the event being reported. Service members are impacted by losses or delays in pay and benefits and must go to different places for pay and personnel support, which contributes to the high cost of manning the current process.

- Inability to Track Active, Guard, and Reserve Status Changes. Guardsmen and Reservists who are called up are sometimes “lost” in the system with consequent risks to their pay, their credit for service, and their benefits.
- Lack of a Single, Comprehensive Personnel and Pay Record of Service. Fragmentary documentation of military service across Components causes Service members difficulty in ensuring that they receive full credit for all service performed and places them at risk of losing benefits to which they are entitled.
- Inconsistent Processes and Data. Because the Services do not collect consistent data, CINCs and other users in DoD and other Federal agencies must apply different business rules, processes, data and systems to obtain personnel data and perform analyses. The selection and implementation of best practices is inhibited. In addition, inconsistent processes and data prevent a personnel specialist from one component or Service of a joint organization from servicing a member from another component or Service.
- Inability to Track Personnel in Theater. Military personnel (Active, Reserve and Guard), as well as DoD civilians, specified foreign nationals, and contractor personnel are not consistently tracked into, around, or departing the theater of operations. Service members thus have difficulty documenting potential exposures to environmental and other hazards of the theater and the Department cannot respond promptly and effectively to problems such as the illnesses of personnel who served in the Persian Gulf War.
- Redundant Data Capture (automated data entry and forms). Redundant data entry restricts efficiency and accuracy and results in disparities among non-integrated systems.
- Multiple, Redundant Systems Support Personnel and Pay. Modernizing, modifying and maintaining legacy systems may not be cost-effective and may in fact prohibit effective business process reengineering. It is difficult to differentiate fully between the savings expected from the elimination of multiple future starts and the savings expected from the need to maintain only one system. The United Kingdom Personnel Administration Agency expects savings of up to 30 percent on the maintenance costs for a single personnel and pay delivery system for their military. DFAS has documented significant savings from consolidation of financial systems to date. Similarly, the experiences of the Marine Corps in consolidating and integrating their systems suggest the potential for significant savings.
- Lack of Security. None of the Services’ systems currently meets the new DoD security standards. Government-wide requirements for information assurance and interoperability would be difficult and expensive to satisfy even if adequate numbers of technical personnel were available.

Section 8147 of the Fiscal Year 1999 Defense Appropriations Act mandated the establishment of a defense reform initiative enterprise pilot program for military manpower and personnel information; to include all functions and systems currently included within the scope of

DIMHRS (Pers/Pay) and all appropriate systems within the enterprise of personnel, manpower, training, and compensation. To ensure a specific identity for the current initiative it has been titled DIMHRS (Pers/Pay). This initiative is bounded by the functionality supported by the legacy systems identified in the Baseline Functional Matrix (BFM) and the Baseline Cost Collection Report. Future efforts will be initiated for DIMHRS (Manpower) and DIMHRS (Training).

The capabilities required within the DIMHRS (Pers/Pay) are described in Section 4. The Key Performance Parameters (KPP) are called out in sub-section 4.1. Section 4 also describes the process parameters or business rules that specify how the processes shall collect data and enter it into the field systems and, ultimately, the corporate database, as well as the system parameters that specify how the field systems and corporate database must operate. While the DIMHRS (Pers/Pay) is a software development initiative, the system parameters may address infrastructure requirements to ensure consistency of required capabilities. The DIMHRS (Pers/Pay) design must include the capability for rapid implementation of system changes to support requirements including legislative and policy changes.

Appendix F provides an enterprise-level listing of the military personnel management and pay functionality designated for inclusion in DIMHRS (Pers/Pay). Additionally, Appendix H contains a listing of the military personnel and pay systems which DIMHRS (Pers/Pay) is expected to replace. It is important to emphasize that while DIMHRS (Pers/Pay) will provide automated support to the military personnel and pay processes, the system will not impede or alter any of the authorities and responsibilities of the Services under Title 10 or 32, USC. DIMHRS (Pers/Pay) is a multi-dimensional project that must blend the following perspectives: Mission support to the war fighter and Service Departments that enhances readiness, Personnel and Pay functional requirements and “best business” practices, technical requirements, and costs, into the overall development strategy and deliver a system that optimizes technology and incorporates improved business practices for the Department of Defense.

The DIMHRS (Pers/Pay) ORD was developed in conjunction with the Joint Integration Group (JIG), which includes representatives from the Joint Staff (J1), all Services and Components, the Defense Finance and Accounting Service (DFAS), and the Defense Manpower Data Center (DMDC). The list of JIG members is provided at Appendix B of this document as the second portion of the distribution list; the first portion of that appendix provides a listing of the Executive Steering Committee members. In concert with the need to integrate the personnel and pay functions, DFAS has been involved with each step of the DIMHRS system development process.



ZEROING IN ON INJURIES

