This appendix describes the full set of performance metrics proposed in Chapter 6. The metrics described in the first two sections of this appendix focus on the outcome measures directly related to the assessment of how well the DES fulfills service member and military service expectations; the metrics described in the last two sections focus on the output measures related to the two interventions discussed in Chapter 6—process improvements and enhanced primary participant competency.

METRICS DERIVED FROM SERVICE MEMBER EXPECTATIONS

As described in Chapter 6, two outcome measures—case variability and number of appeals—derive from how well the DES fulfills service member expectations.

Metrics for the Case Variability Outcome Measure

We recommend the following metrics to assess the case variability outcome measure: (1) distribution of medical boards by diagnostic category; (2) statistical analysis of dispositions (fitness, rating, and personnel action) for major diagnostic categories; and (3) statistical analysis of dispositions (fitness, rating, and personnel action) for special diagnostic categories (for example, HIV).

These metrics address the relatively aggregate question of whether the military departments are applying disability policy consistently. The distribution of medical boards by diagnostic category is useful primarily for setting the stage or the context for the statistical analyses of dispositions; it also helps to identify the effect of different conditions of service among the military services. The statistical analyses are the primary means of assessing consistent application of disability policy.

The OSD should obtain quarterly data for the metric, distribution of medical boards by diagnostic category, using the medical boards sent to the Informal PEB in the previous quarter as a basis for the metric. Each military department’s trend serves as the primary benchmark because different conditions of service in each of the departments make comparisons among the departments less meaningful. The data for this metric should be collected using an automated system or a hard copy form included
in the medical board as the Informal and Formal PEBs render a decision on each medical board.

The statistical analyses differ from the other metrics we recommend. These metrics need to be developed because they are not part of the system. We believe an independent organization, such as the DoD Office of the Inspector General, should perform the analysis.\(^1\) We recommend drawing a random sample from medical boards on which the Informal and Formal PEBs rendered decisions in the previous year. To ensure adequate sample sizes, these analyses should be performed only for medical boards from the top five diagnostic categories.

The analysis should test the hypothesis that a difference exists in the dispositions regarding fitness, rating, or personnel action for service members with the same disabling conditions. This hypothesis should be tested within and across military departments. The appropriate benchmarks are military department trends in comparison with the overall DoD standard of no significant difference within or among military departments.

Special diagnostic categories (for example, service members who are diagnosed as HIV-positive) may require a similar analysis of dispositions from time to time. These analyses should be conducted as needed.

**Metrics for the Number of Appeals Outcome Measure**

We recommend the following metrics for assessing the number of appeals outcome measure: (1) percent of Informal PEB decisions appealed for fitness; (2) percent of Informal PEB decisions appealed for rating; (3) percent of Formal PEB decisions appealed for fitness; (4) percent of Formal PEB decisions appealed for rating;\(^2\) and (5) the percent of appeals overturned for each of these categories.

The underlying premise is that the number of appeals serves as a proxy for the level of satisfaction with the process, within a particular part of the DES or for a particular military department. Increasing appeals could suggest growing service member dissatisfaction with the operation of the DES; decreasing appeals could suggest that a military department has implemented a process improvement from which other military departments or other parts of a military department DES could benefit.

The OSD should gather quarterly summary data from the military departments using as a basis medical boards that reflect Informal and Formal PEB decisions rendered in the previous quarter. The appropriate benchmarks are military department trends and comparisons with the overall DoD average. The data for these metrics should be collected using an automated system or a hard copy form included in the medical

\(^1\)A similar analysis was conducted to support a DoD Inspector General Audit Report on “Medical Disability Discharge Procedures” in June 1992.

\(^2\)For example, for Formal PEB decisions on 100 medical boards, service members appealed four for disagreement with the fitness determination, 27 for disagreement with the rating decision, and 12 for disagreement with both; or, 4, 27, and 12 percent, respectively.
board as the Informal PEB and Formal PEB renders a decision on each medical board.

In addition, because service member perceptions may be as important as empirical data in assessing whether service members believe their expectations are being fulfilled, we recommend several other general metrics designed to investigate this outcome measure more directly: percent of service members satisfied with the disposition decision; percent of service members satisfied with the process (timeliness, courtesy, responsiveness, and assistance); percent of service members satisfied that they received due process; number of congressionals (letters written by service members to their representatives in Congress); GAO reports; and IG reports.

We recommend that the OSD develop a DoD-wide survey that the military departments can administer to all service members who complete processing through the DES. The purpose of this survey is to capture the service members’ perceptions regarding the first three of these metrics: percent of service members that are satisfied with the disposition decision; percent of service members that are satisfied with the process (timeliness, courtesy, responsiveness, and assistance); and percent of service members that are satisfied that they received due process. Many of the metrics described later in this appendix provide insight into what actually happens with components of the DES that affect service members. The survey will provide a (lagged) link between interventions in the DES and their perceived impact on service members. We recommend a 100-percent survey, with the results analyzed annually. The results should be benchmarked against trends and explicit DoD standards.

Letters from senators and representatives sent to the DoD on behalf of service members generally indicate a significant level of dissatisfaction with the system. Any service member who has exhausted administrative avenues of relief for a perceived injustice and chooses to take his or her case to a member of the Congress has expressed a level of dissatisfaction that deserves special attention. Data for this metric is easy to collect directly within the correspondence management system. We recommend annual assessments, broken out by military department, that are benchmarked against trends and DoD averages.

GAO and IG reports represent ad hoc metrics that can provide additional insight into the DES, and IG reports can be commissioned to focus on particular issues. Like the pleas to members of Congress, these reports may also indicate a certain level of dissatisfaction with the system, although we believe they will be too small in number to draw any conclusions from them.

**METRICS DERIVED FROM MILITARY SERVICE EXPECTATIONS**

Two general outcome measures derive from how well the DES fulfills service expectations: total system cost and time to replace an unfit service member.
Metrics for the Total System Cost Outcome Measure

We recommend the following metrics for assessing the total system cost outcome measure: (1) total resources for the operation of the DES; (2) pay and allowances for service members not performing their duties; and (3) the cost of disability severance pay.

The underlying issue these metrics address is the burden the DES places on a military department. The military departments strive to minimize these costs to be consistent with the goal of accomplishing the purpose of the Disability Evaluation System. We recommend reporting cost data annually and benchmarking the data against trends.

The total resources devoted to operating the DES is an important indicator of how much of a direct burden the DES places on a military department; this metric is important also because it forms the basis of the metrics we recommend for assessing productivity. The total resources metric is an aggregation of pay and allowances or salaries of military and civilian primary participants in the DES; information system costs; training costs; and operations and maintenance costs (other than training and civilian salaries). Pay and allowances for members not performing their duties (those who have entered the DES and been removed from their unit) indicate the opportunity cost of a service member in the DES. The longer the service member remains in the system, the higher the cost. This metric places a value on processing time and allows for a comparison between the total resources devoted to operating the system and the cost of interventions designed to shorten the processing time.

Metrics for the Time to Replace an Unfit Service Member Outcome Measure

We recommend the following metrics for assessing the time to replace an unfit service member outcome measure: (1) for service members returned to duty, average total time from referral to an MTF to return to duty; (2) for service members separated or retired, average total time from referral to an MTF to termination; and (3) average total time on the TDRL, broken out by the diagnostic category. We recommend updating each of these metrics quarterly.

These time-to-replace metrics focus on the key contributor to service satisfaction (or dissatisfaction)—the time it takes to replace a service member who is no longer able to function as part of a unit. The metrics address various obstacles that stand in the way of a commander initiating a request for a replacement. Although important to the individual commander, we do not include in the metrics the time it takes to obtain a replacement through the personnel system because that system is not part of the DES.

The first two time-to-replace metrics, the average time from referral to the military treatment facility until return to duty and the average time from referral to the military...
tary treatment facility until termination, are computed based on information in the medical board and reported using an automated system or a hard copy form attached to the medical board. These metrics should be broken out by diagnostic category and phase of the DES (Medical Evaluation Board, Physical Evaluation Board, or post-PEB appellate review). Cases in which the service member is returned to duty or terminated or removed from the TDRL in the previous quarter form the basis of the monitored population. The average times are benchmarked against historical trends. A significant increase in the average time to process cases should lead to an investigation of its underlying causes. To accommodate such an activity, the data should be collected in enough detail to allow for an inspection of the distribution of processing times.

We recommend similar metrics for service members placed on limited duty. Several primary participants and other officials we interviewed expressed concern with the number of service members placed on limited duty, both before and after being referred to the DES. In recognizing that the limited duty determination is not a part of the DES, we recommend a metric that separately monitors the distribution of time on limited duty before and after referral to the DES, with an eye toward ensuring that the referral is accomplished at the appropriate time.

METRICS RELATED TO ENHANCING PRIMARY PARTICIPANT COMPETENCY

Three general output measures capture the effect of interventions targeted at enhancing primary participant competencies: productivity, cost per medical board decision, and percent of primary participants certified. The input measure, total resources, augments the output measures.

Metrics for the Productivity Output Measure

We recommend the following metrics for assessing the productivity output measure: (1) medical board decisions rendered per Informal PEB member; (2) medical board decisions rendered per Formal PEB member; (3) medical board processing completed per full-time PEBLO and PEB administrative action officer assigned to the PEB; (4) primary participant satisfaction, by primary participant population; and (5) turnover, by primary participant population.

These metrics provide insight into the effectiveness of primary participants in the system. For example, declining productivity should theoretically lead to decreased service member and service satisfaction. Monitoring this metric and acting upon changes enables leaders to implement corrective action in time to head off decreased satisfaction. In other words, productivity is a leading indicator of service member and service satisfaction.

Metrics for the other two output measures for enhancing primary participant competency, cost per medical board decision and percent of primary participants certified, and the input measure total resources devoted to the Disability Evaluation
System, are leading performance indicators foretelling change in the lagging indicator productivity, and suggest where interventions may be most effective.

For the first three productivity metrics, the military departments should pull data from Informal and Formal PEB decisions rendered and total medical boards processed in the previous quarter together with current manning (staffing) data and report the summary results quarterly. The results should be represented as the quotient of the number of decisions rendered in the previous quarter and the average number of Informal PEB members, Formal PEB members or full-time PEBLOs, and PEB administrative action officers. These metrics should be benchmarked against trends and DoD averages.

The fourth and fifth productivity metrics—primary participant satisfaction by primary participant population and turnover by primary participant population—are interrelated, with turnover being a manifestation of the level of satisfaction in some cases. We recommend an annual 100-percent survey of primary participant satisfaction, summarized by primary participant populations (specifically, Medical Evaluation Board members and approving authorities, PEBLOs, PEB administrative action officers, and approving authorities). The surveys should probe for the source of satisfaction or dissatisfaction through structured multiple-choice questions, and solicit suggestions for ways to improve the operation of the system through open-ended questions. Summary statistics on the level of satisfaction or dissatisfaction and their underlying causes should be reported to the OSD. These metrics should be benchmarked against trends.

Turnover statistics should be reported annually and expressed in terms of the percent of primary participants (by population) assigned to positions supporting the DES at the beginning and end of the previous year. The data should be derived from unit manning documents. This metric should be benchmarked against trends. As suggested earlier, primary participant satisfaction is a leading indicator of turnover rates; a decrease in the former affords the opportunity to apply interventions designed to stem the latter (particularly if the cause of dissatisfaction can be identified).

**Metrics for the Cost Per Medical Board Decision Output Measure**

We recommend total system cost divided by total Informal and Formal PEB decisions rendered as the metric for assessing the cost per medical board decision output measure. Military departments should report this metric to the OSD annually, based on the obligated resources and the medical board decisions rendered in the previous year.

The total system cost should be derived from budget data; the number of medical board decisions rendered should be captured from an automated system or from a hard copy form accompanying the medical boards. We recognize that this metric does not provide an entirely accurate characterization of the cost per medical board
decision. However, in the absence of dramatic changes in obligated resources or in the number of medical board decisions rendered in a particular year, the metric provides a reasonable indicator of cost per medical board decision. This is the primary reason we recommend an annual report, as opposed to more-frequent reports. Trends should be the benchmark for this metric with the objective of continually decreasing the cost per medical board decision over time.

Metrics for the Percent of Primary Participants Certified Outcome Measure

We recommend the following metrics for assessing the percent of primary participants certified outcome measure: (1) percent of commanders’ letters submitted by number of certified commanders; (2) percent of medical boards dictated by number of certified physicians; (3) percent of PEBLOs certified; (4) percent of Informal PEB members certified; (5) percent of Formal PEB members certified; and (6) percent of PEB administrative action officers certified.

As noted in Chapter 5, we believe that certification of the primary participants is key to accomplishing the purpose of the DES. As a result, these metrics should be benchmarked against both trends and demanding DoD standards. We recommend the military departments provide these metrics quarterly.

As also noted in Chapter 5, we recommend that commanders and physicians become certified through their respective just-in-time distance training packages available from an OSD Web site. This will provide the opportunity for nearly 100-percent certification within the quarterly reporting time frame. Periodic training for PEBLOs, PEB members, and administrative action officers, if scheduled as it is currently, may result in lower rates of certification because of the limited scheduling of training opportunities. Reporting these certification metrics quarterly, however, will indicate whether the infrequency of training opportunities is a significant problem (as it may be for annual training and high personnel turnover) calling for an intervention.

For the first two metrics for this outcome measure, the commanders submitting letters and the physicians dictating boards should self-report whether they are certified. This information should be captured in an automated system or on a hard copy form accompanying the medical board when it arrives at the Informal PEB. We found that incomplete commanders’ letters and incomplete narrative summaries are two of the current major causes of delay in the DES. Associating the data from specific commanders or physicians with the respective medical board will allow the military departments to assess whether noncertified commanders and physicians materially contribute to delays in the system and, similarly, whether the training leading to certification is accomplishing its purpose.

4PEB decisions rendered on medical boards in a particular year may have begun in a previous year (and used resources obligated for that time frame). Similarly, the PEBs may begin considering a medical board in a particular year but may not render a decision in that year (and will use resources obligated for that time frame but attributed to completed cases). Consequently, significant increases or decreases in this metric in a particular year should first be reviewed in terms of a potential anomaly in the obligated resources or the medical board decisions rendered in that year.
For the four other metrics for this outcome measure, we recommend that the military departments obtain and aggregate the data from personnel records. In these cases, individuals act collectively to process medical boards. Consequently, the overall level of certification is a more important measure than individual certification data.\(^5\)

**Metrics for the Total Resources Input Measure**

We recommend the following metrics for assessing the sole input measure, *total resources*: (1) number of individuals broken out by DES phase or primary participant population devoted to the DES; (2) pay and allowances or salaries of individuals broken out by phase or primary participant population devoted to the DES; (3) information management system costs; (4) training costs; and (5) operations and maintenance costs (other than training and civilian salaries).

Although the total level of resources is important as an indicator of the resource burden the DES places on a military department, how those resources are allocated to the various phases of the DES influences system performance more directly. We structure the metrics in this area accordingly.

The military departments should report total resources devoted to the DES by major budget areas and phases of the system. For the Medical Evaluation Board phase, training costs are the key metric. For the PEB phase, the metric should include pay and allowances for military primary participants, civilian salaries, training, and information system procurement.

We recommend preparing annual performance reports, extracted from budget data, for both the previous year and for the upcoming budget year. These metrics should be benchmarked against trends. The resources allocated in the budget reflect a commitment to future performance objectives. Based on that financial commitment together with intended interventions, the military departments should provide performance objectives for other performance measures (for example, productivity, cost per medical board decision, percent of primary participants certified, and processing time).

**METRICS RELATED TO THE PROCESS IMPROVEMENT INTERVENTION**

Three general output measures capture the impact of actions targeted at the process improvement intervention: processing time, number of reworks, and time to promulgate policy changes.

---

\(^5\)Because PEBLOs handle individual medical boards, for the percent of PEBLOs certified metric we considered indicating on each medical board whether the PEBLO handling it was certified. We did not recommend that approach primarily because a PEBLO may become certified during the time in which he or she is handling the case, confusing whatever impact certification may have.
Metrics for the Processing Time Output Measure

We recommend the following metrics for assessing the processing time output measure: (1) distribution of waiting times for narrative summary dictation (time from referral to the MTF to dictation of the narrative summary or to the service member being returned to duty); (2) distribution of waiting times for Informal PEB consideration (time from dictation of narrative summary to Informal PEB decision); (3) distribution of waiting times for Formal PEB consideration (time from Informal PEB decision to Formal PEB decision); and (4) distribution of waiting times for decision by post-PEB appellate review boards (time from Formal PEB decision to final decision by highest-level in-service appellate review).

Although average processing time can and should be calculated and reported, the distribution of waiting times provides significantly more information on performance. We recommend breaking out the separate phases of the system (including levels within phases, such as the Informal and Formal PEB levels in the physical disability evaluation phase) to better identify the potential need for targeted interventions. The waiting times should be computed based on the event that sends a medical board to the next phase or level in the DES process without regard for whether the medical board is returned or delayed because of incomplete information.6 (The metrics associated with the next performance measure—number of reworks—focus on medical boards returned to an earlier phase or level in the process.)

The processing-time metrics should be reported quarterly by diagnostic category based on medical board decisions rendered at each level during the previous quarter. They should be benchmarked against trends and DoD standards. The data to develop these metrics should be captured in an automated system or on a hard copy form that accompanies the medical board.

Metrics for Number of Reworks Output Measure

We recommend the following metrics for assessing the number of reworks output measure: (1) percent of deficient commanders’ letters at Informal PEBs, by reason; (2) percent of deficient commanders’ letters at Formal PEBs, by reason; (3) percent of deficient narrative summaries at Informal PEBs, by reason; (4) percent of deficient narrative summaries at Formal PEBs, by reason; (5) percent of incomplete medical boards at Informal PEBs, by reason; and (6) percent of incomplete medical boards at Formal PEBs, by reason.

We recommend a particular focus on commanders’ letters, narrative summaries, and medical boards because, as noted earlier, numerous primary participants identified these items as a source of delay. The reasons for deficiencies will help to focus on the appropriate interventions to, for example, modify training content related to primary participant certification. We do not recommend employing metrics related to the

---

6For example, the time period from when a medical board is returned to the MTF from the Informal PEB because of an insufficient narrative summary should be counted against the waiting time for Informal PEB consideration.
amount of delay that reworks cause because the focus should be on eliminating the need for reworks, regardless of how long a particular rework delays the overall process.

The reworks metrics should be reported quarterly based on medical board decisions rendered at each DES phase and level during the previous quarter. They should be benchmarked against trends. The data to develop these metrics should be captured in an automated system or on a hard copy form that accompanies the medical board.

**Metrics for the Time to Promulgate Policy Changes Output Measure**

We recommend the following metrics for assessing the *time to promulgate policy changes* output measure: (1) time to transmit information to the field; (2) time to update military department policy documents; and (3) time to update training. These metrics primarily address the source of variation among military departments.

Rather than suggesting the military departments report these metrics at fixed intervals, we recommend that the military departments’ Secretariat send a letter confirming the promulgation of policy in each of these three metrics. The OSD should develop the target metric for promulgating policy based on military department responses. These time to promulgate policy change metrics should be benchmarked against military department trends and the DoD average.