# FEASIBILITY STUDY OF OPTIMAL APPROACHES FOR EVALUATING NIAID ESSENTIALS OF SUPERVISION (EOS) PROFESSIONAL DEVELOPMENT PROGRAM

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## Executive Summary

The focus of this feasibility study is to identify appropriate evaluation methodologies, data collection instruments, techniques, and procedures to measure relevance, effectiveness, and impact of the National Institute of Allergy and Infectious Diseases (NIAID), Essentials of Supervision (EOS): Strategies for Success professional development program. This program is led by the Leadership and Organization Development (LOD) team, Workforce Retention and Development Branch (WRDB), within the Office of Workforce Effectiveness and Resources (OWER).

EOS is a management professional development program aimed at enhancing managers' supervisory skills to assist scientists and those who support science. It is a six-month program that begins with a full day orientation and is followed by monthly 3-hour sessions that include information on hiring, employee relations and ethics, and performance management. OWER plans to implement the EOS program on an ongoing basis offering at least two 25 participant cohorts annually. A prototype of the program was offered in Spring 2007 and attended by 24 participants.

OWER LOD staff are interested in ensuring that the EOS program: 1) meets needs of managers with 0-5 years of NIAID supervisory experience and 2) enhances the Institute's work environment to support conduct of NIAID funded scientific research. The feasibility study examined whether an evaluation could be designed to test if the EOS program is being implemented as intended (process) and if the program can achieve its goals and objectives (outcomes). The NOVA evaluation team conducted a systematic assessment of optimal plans to evaluate EOS by proposing questions to be answered by the evaluation, developing and assisting with data collection instruments, and analyzing data provided by prototype participants and from literature reviews.

Donald Kirkpatrick's (1975) model for evaluating training programs was the framework used to assess EOS effects. According to this model, four levels of training can be evaluated: **_Reaction_** to training (thoughts and feelings about the training), **_Learning_** of content (increase in knowledge, capacity, skills), **_Transfer_** of learned content to trainee's setting (behavior change, use of new skills), and **_Results/Impact_** of transferred content in trainee's setting (effect on the setting/environment resulting from trainee's performance).

After conducting the Feasibility Study, NOVA concludes that a systematic, full-scale evaluation of the EOS program is feasible and needs to be conducted to determine effectiveness of the EOS program to meet its stated goals. The information obtained through activities conducted as part of the feasibility study was used to support evaluation design strategies and methodologies recommended in this report. A description of key information that will be learned from a systematic evaluation will follow.

**KEY INFORMATION TO BE LEARNED FROM A SYSTEMATIC, FULL-SCALE EVALUATION OF THE EOS PROGRAM**

- Level of satisfaction with the EOS program including:
  - ✓ Content (e.g., set learning objectives, participant learning expectations)
  - ✓ Structure (e.g., cohort approach, opportunities for networking and collaborative problem solving)
  - ✓ Resources and materials available for each topic area
  - ✓ Other program aspects (e.g., Skillscope 360 assessment, individual coaching, location, room).

- Perceived relevance to NIAID supervisory role including:
  - ✓ Understanding of how good management at NIAID supports science
  - ✓ Use of tools and strategies that are applicable to different management positions

- Effectiveness of EOS in increasing knowledge of high quality management (e.g., practices, tools, strategies) critical for NIAID supervisors and role of supervisors within NIAID structure

- Supervisory performance over time including:
  - ✓ Efficiency as managers/supervisors
  - ✓ Improved relationships with staff

- Improvement in NIAID managers support to researchers conducting NIAID-funded scientific research.

This report summarizes NOVA Research Company's (NOVA's) approach to developing an evaluation plan of the EOS program, as well as theoretical foundations on which the evaluation approach was built. The report also provides tools created by NOVA—such as the EOS Program Evaluation Logic Model and Evaluation Planning Matrix—that NIAID OWER LOD can use to develop a comprehensive evaluation plan. Exhibit 1 on the next page presents a compliance matrix summarizing how this report addresses each of the technical requirements of this project.

# EXHIBIT 1. MATRIX OF FINAL REPORT COMPLIANCE WITH TECHNICAL REQUIREMENTS OF THE FEASIBILITY STUDY OF OPTIMAL APPROACHES FOR EVALUATING NIAID EOS PROGRAM

| Detailed Technical Requirement | Description | Report Section Where Addressed |
|---|---|---|
| Identify relevant stakeholders<br><br>Clarify issues and objectives<br><br>Develop a logic model | Document those who have an interest in evaluation findings and the extent of their involvement in evaluation planning.<br><br>Identify key stakeholders, EOS goals, objectives, and related issues of relevance to the evaluation.<br><br>Develop a logic model of the EOS program implementation to facilitate shared understanding of the program's structure, resources, planned activities, and outcomes. | Program description, pages 2 to 4. Step 1 and Step 2, pages 12 to 15. |
| Conduct a literature review<br><br>Develop study questions for the evaluation<br><br>Identify key variables | Review relevant literature, related studies on development, implementation, and impact of similar professional development programs.<br><br>Identify evaluation questions on process and outcomes of interest to stakeholders that are clear, specific, and answerable.<br><br>Discuss specific information needed to answer evaluation questions. | Step 2 and Step 3, pages 12 to 19; Appendix C: Results of Literature Review. Answering Evaluation Questions, pages 24 to 32 |
| Review existing data<br><br>Test instruments / procedures.<br><br>Analyze and interpret data<br><br>Plan for data collection/ analysis | Review existing data sources to identify key variables for the evaluation.<br><br>Determine types of data that will be used to answer study questions. Identify feasible performance and comparison groups.<br><br>Develop data collection instruments. Develop data analysis plan.<br><br>Determine strategies to ensure data integrity and to address ethical considerations. | Analysis of prototype data, pages 6 to 10. Appendix B: Results from Prototype Data Analyses. Step 4 and Step 5, pages 19 to 24. Answering Evaluation Questions, pages 24 to 32 |
| Recommend evaluation design | Submit process and outcome evaluation design.<br><br>Recommend for or against proceeding with process and outcome evaluation and provide justification. | Program Goals, pages 25 to 31. Evaluation Design Options, pages 27 to 32. |

*NOVA Research Company*

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# NIAID Essentials of Supervision: Strategies for Success Professional Development Program

# Evaluation Feasibility Study Report

# Introduction

The National Institute of Allergy and Infectious Diseases (NIAID) administers the Essentials of Supervision (EOS): Strategies for Success professional development program led by the Leadership and Organization Development (LOD) team, Workforce Retention and Development Branch (WRDB), within the Office of Workforce Effectiveness and Resources (OWER). EOS is a management professional development program whose objective is to enhance managers' supervisory skills to guide and assist scientists and those who support science. EOS seeks to provide participating supervisors with tools, strategies, and approaches to effectively support the scientific mission of NIAID. NIAID's vision is that efficient managers are part of an optimal context in which science and research can thrive. The EOS program has a variety of features directed at accomplishing program goals for all NIAID supervisors, including those at the NIAID Rocky Mountain Laboratories in Montana.

The EOS prototype is a six-month program that begins with a full day orientation and is followed by monthly 3-hour sessions that include information on hiring, employee relations and ethics, and performance management. Participants have the opportunity to learn about NIAID's expectations for successful management, obtain assessments of their management skills (e.g., 360 degree multi-rater assessment, one-on-one coaching), create individual development plans in consultation with their coaches, and learn about common management approaches and practices. EOS uses a *cohort* approach in which the same group of participants attends all program sessions together creating an opportunity for interaction and networking across NIAID.

The EOS Design Team—a collaboration between OWER LOD staff and a group of trans-NIAID senior managers—developed a prototype of the EOS program. The EOS program prototype was offered in Spring 2007 and attended by 24 participants. Throughout the program, prototype participants provided feedback on individual sessions, overall program features (e.g., format, content), and offered recommendations for program improvements. OWER plans to implement the EOS program on an ongoing basis offering at least two 25 participant cohorts annually. Managers with 0-5 years of NIAID supervisory experience are the primary target for EOS program.

NOVA worked collaboratively with representatives from NIAID's OWER WRDB and Strategic Planning Evaluation Branch (SPEB) to develop the best overall approach and most appropriate measures to evaluate the EOS training program. Findings from the feasibility study will inform about needed refinements for the current EOS program prototype, allocation of training resources, and relevant EOS training policies for NIAID supervisors.

The statement of work for the EOS feasibility study prescribed use of Donald Kirkpatrick's (1975) model for evaluating training programs. According to this model, four levels of training can be evaluated. Information from each prior level serves as the basis for the next level's evaluation, with each successive level representing a more precise measure of training effectiveness.

The four levels of Kirkpatrick's model measure:

- ***Reaction*** to training (thoughts and feelings about the training)
- ***Learning*** of content (increase in knowledge, capacity, skills)
- ***Transfer*** of learned content to trainee's setting (behavior change, use of new skills)
- ***Results/Impact*** of transferred content in trainee's setting (effect on the setting/environment resulting from trainee's performance).

Results from EOS feasibility study addresses Kirkpatrick's conceptual framework and provide information and related suggestions to evaluate the model's four components.

# Purpose of Feasibility Study

The purpose of this evaluation feasibility study was to determine whether conducting a full-scale evaluation of the program was appropriate and to identify best possible evaluation designs, methodologies, and data collection strategies to assess program effects. OWER LOD staff are interested in ensuring that the EOS program: 1) meets needs of managers with 0-5 years of NIAID supervisory experience and 2) enhances the Institute's work environment to support conduct of NIAID funded scientific research. The feasibility study examined whether an evaluation could be designed to test if the EOS program is being implemented as intended (process) and if the program can achieve its goals and objectives (outcomes). Results from the evaluation feasibility study will allow OWER LOD to plan for any subsequent process (i.e., EOS implementation plan, program elements that lead to improvement of EOS) and outcome (i.e., enhanced management skills, effective support for scientific research) evaluations. The timeliness of this feasibility study makes it possible to use findings to provide the basis for refinement of the prototype, allocation of training resources, and establishment of policies in EOS training for NIAID supervisors[1].

The NOVA evaluation team conducted a systematic assessment of optimal plans to evaluate EOS by proposing questions to be answered by the evaluation, developing and assisting with data collection instruments, and analyzing data provided by prototype participants and from literature reviews. This report provides guidelines and specific recommendations to design a full-scale process and outcome evaluation of NIAID's EOS Professional Development Program.

# Essentials of Supervision: Strategies for Success (EOS)

***Background***

EOS is a management development program that is based on understanding that good management equals good science and a commitment to providing new managers with an opportunity to understand and develop common management methodologies, concepts, and practices. EOS program objectives are included in Exhibit 2.

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[1] There is a distinction at NIAID between supervisors and managers based on their position descriptions. The EOS program is oriented to both positions; thus, the term "manager" and "supervisor" are used indistinctively throughout the report.

# EXHIBIT 2. NIAID EOS GOALS

The EOS program seeks to provide:

a. A shared understanding of qualities and requirements of effective management at NIAID and how it supports science
b. A vehicle for supervisors with 5 years or less experience at NIAID to enhance skills for quality supervision
c. An understanding about the NIAID structure, how to define the supervisory role within that structure, and tools and strategies to succeed;
d. Structured opportunities for networking and collaborative problem solving among participants from various NIAID divisions.
e. References and resources available at NIAID for each topic area.

The EOS program evolved from another OWER LOD training, NIAID Art of Leadership (AOL) training program. EOS was also developed with input and feedback from AOL training alumni who provided suggestions focused on requirements for NIAID supervisors new to supervision and those with some supervision experience, but limited supervisory professional development. Suggestions from AOL alumni for EOS are included in **Appendix A**.

## Design Team

EOS was designed to meet needs of NIAID supervisors from a wide range of organizational components, diverse levels of experience and both administrative and scientific disciplines. A design team of 14 NIAID supervisors provided input from diverse perspectives across the Institute
and helped with design and development of the EOS program. The design team ensured that EOS would be NIAID-specific and applicable to most NIAID supervisors in all divisions.

## Prototype Program elements
The EOS prototype is a six-month program that begins with a full day orientation followed by multiple three-hour sessions delivered during the next six months. EOS aims to provide participants with a clear view of successful management at NIAID, an objective assessment of their capabilities through a 360 multi-rater assessment and one-on-one coaching, an opportunity for individual development planning, and common management approaches and practices. The same participants attend all sessions –cohort approach. A prototype of EOS began in Spring 2007 and ended in December 2007 and included the sessions listed in Exhibit 3.

EXHIBIT 3. NIAID EOS PROGRAM SESSIONS

**Program Orientation**
- Managing at NIAID: 3 Perspectives
- Management roles, rights, and responsibilities
- A multi rater (360) view of your management skills
- Development Planning

**Setting Direction for Your Unit**
- Alignment with organizational goals
- Support of your boss and your peers
- Focus on core work activities
- Assign work to maximize productivity and quality

**Hiring the Best Person**
- A framework for hiring- key legal and procedural considerations
- Strategies for screening candidates
- Behavior based interviewing - tools and strategies
- Getting your employee started

**Employee Relations/Ethics**
- A framework for employee relations-key legal/procedural considerations
- Understanding leave options
- Conduct vs. performance problems
- Ethical considerations

**Performance Management**
- Performance management at NIAID - key legal and procedural considerations
- Creating performance plans
- Defining standards and measuring performance
- Tracking performance

**Coaching Your Employees**
- A model for coaching
- Providing ongoing feedback
- Rewards and recognition

**Building a Business Case**
- Understand the impact of competing demands for resources
- Present your goals in the context of organizational needs and benefits
- Write a business case that increases the chances of funding and support

*Prototype Participants*

A total of 24 individuals with various levels of NIAID management and supervisory experience participated in the EOS prototype. Attendance to EOS sessions ranged from 8 to 21 participants, with an average of 13.4 participants attending. Data on attendance by EOS sessions showed that the majority (16 individuals, 67%) attended most sessions, 5-7 sessions; seven (29%) attended 3-4 sessions; and only one person attended 1 session. Participants belonged to several divisions and offices within NIAID, including the Division of Acquired Immunodeficiency Syndrome (DAIDS), Division of Allergy, Immunology, and Transplantation (DAIT), Division of Extramural Activities (DEA), Division of Clinical Research (DCR), Division of Microbiology and Infectious Diseases (DMID), Dale and Betty Bumpers Vaccine Research Center (VRC), Division of Intramural Research (DIR), Office of the Director (OD), and the Office of Technology Development. Years of NIAID supervisory experience among participants was collected at the final EOS session. Six out of 13 participants (46%) answering the question on years of NIAID supervisory experience reported having 5 years or less of related experience. No other information (e.g., demographics) on prototype participants was collected (e.g., past experience as non-NIAID managers, past management trainings).

# Evaluation Plan Development

## Overview of Evaluation Approach

Development of an evaluation plan incorporates evaluation objectives within a conceptual framework that depicts program activities and outcomes, as viewed by key stakeholders. The NOVA team initiated evaluation planning processes with face-to-face meetings with the NIAID OWER WRDB Branch Chief, LOD Program Officer, other program staff, and NIAID SPEB staff to clarify

program goals, objectives, activities, and primary stakeholders of the evaluation. These meetings also served to become familiar with functioning of OWER within the Office of Management and Operations (OMO) and specifically with WRDB LOD.

EOS program outcomes of interest to be evaluated reflected Kirkpatrick's four-level model: reaction to training, learning of program content, transfer of learned skills to the workplace setting, and impact on creating a supportive environment for scientific research. NIAID EOS is being implemented for the first time; thus, learning about managers' satisfaction with the program and its effectiveness to enhance managers' knowledge of tools, strategies, and approaches to effectively support scientific research are important short-term program goals. The expected behavioral changes in application of learned skills and knowledge in the workplace setting and impact on support to conduct NIAID scientific projects are intermediate and long-term goals, respectively. Findings and recommendations from the feasibility study are described throughout this report.

# Feasibility Study Questions

NOVA aimed to gain a clear understanding of NIAID's expectations for a systematic, full-scale evaluation of EOS. These questions were addressed to inform the evaluation feasibility study:

What is the purpose and scope of EOS evaluation?

What evaluation questions are important to NIAID?

- What process and outcome evaluation methodologies and techniques are most appropriate for assessing the EOS Program?

- Are metrics and methods built into the existing EOS participant feedback forms adequate to assess if participants perceive that the EOS program meets stated learning objectives regarding knowledge/skills relevance and are they transferable to the workplace?

- Who are key program stakeholders that need to be involved in program evaluation?

- What EOS program activities, operations, and/or programs can and should be evaluated?

- What are appropriate process evaluation questions? Can they be answered with existing resources and within the available timeframe?

- How long does the EOS program have to be in operation before having measurable effects?

- Are program components (e.g., skills in coaching employees, individual management plans) expected to show measurable effects at different times? If there are differential time lags, what is the appropriate sequential approach to evaluate program effects?

- What existing data sources can be used to evaluate this Program? What new data need to be collected? What comparison groups are available and appropriate?

- What is the cost to collect various types of data in dollars, time commitment, and burden on staff and evaluation participants? Is this cost reasonable given the operating cost of the EOS program?

- Is there adequate justification to conduct a full programmatic process and outcome evaluation at this time? If so, what are appropriate approaches to evaluating effects of the EOS program?

Questions based on Kirkpatrick's training evaluation model were also addressed:

*Reaction***:**

Are metrics and methods built into the existing EOS participant feedback form adequate to assess participants' satisfaction with the EOS program?

*Learning*:

Are there pre- and post-tests developed to assess participants' knowledge and changes in knowledge regarding EOS learning objectives? If not, can these be developed and implemented?

*Transfer*:

Are metrics and methods available or can these be developed and implemented to measure behavioral changes in supervisors who have completed the EOS?

*Results/Impact*:

Are metrics and methods available or can these be developed and implemented to assess outcomes in management practices (e.g., hiring the right individual, conducting ethical employee relationships, coaching skills, and increased networking)?

# Analysis of Prototype Data

As part of the Feasibility Study, the NOVA team had the opportunity to analyze data collected on the EOS prototype by Cooperative Personnel Services (CPS) consultants. CPS was contracted by OWER to implement the EOS prototype training curriculum. CPS collected data on participants' perceptions regarding the overall program (e.g., satisfaction, relevance to their supervisory/ management role, whether the program met participant expectations) and about program's structure, content, format, and schedule. Respondents to a survey on overall program satisfaction were instructed to answer questions <u>as if they were supervisors with 0-5 years of NIAID supervisory experience</u>. Individual sessions were evaluated at the end of each session. In addition, participants in the prototype training were asked to complete a form describing situations when they had applied EOS-related learned knowledge. A plus/delta assessment activity was also conducted at the end of the final session. More detailed results are presented in **Appendix B**[2]**.**

A total of 21 participants out of 24 enrolled in the program completed the survey on the overall experience with EOS. Forty-six percent of those who completed this survey reported having 5 years or less as NIAID supervisors[3]. The number of participants completing individual session assessments at the end of each session day ranged from 5 to 20. Five participants completed the form describing how they had applied EOS sessions knowledge. Some key findings from the data analyzed include:

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[2] **Note of Caution:** The number of respondents for the data analyzed ranged from 5 to 21 participants. This sample is too small to make any definitive statements. Thus, implications from the prototype data analyzed should be looked at with caution.

[3] Missing data: eight participants did not report their years of experience as NIAID supervisors

Overall program satisfaction (n=21)

Majority of EOS participants reported a positive experience[4,5].

- They reported being "very to extremely satisfied" with the EOS program (71%)
- They perceived the EOS program to be "very relevant" to their supervisory/management role (85%)
- They thought that EOS program sessions met their learning expectations "well to very well" (85%)
- At least 62% of all participants also reported that stated EOS training objectives were "well to very well" met.

Increase EOS related management knowledge (n=21)

For each EOS session, participants were asked if the session would increase related knowledge among participants with 0-5 years of NIAID supervisory experience.

- More than four of five participants (at least 86%) perceived that each EOS session would increase related knowledge ("some to a lot") among supervisors with only 0-5 years of experience.

Use of EOS related management knowledge (n=5)

Of the five participants who completed forms describing situations in which they had applied EOS content, they provided a variety of examples where content from all sessions appears to have been used. For example regarding the session on "Hiring the Best Person", two participants reported having used questions provided in the session when interviewing candidates. From the session on "Coaching your Employee", one participant mentioned improving his/her skills in providing feedback to employees. Another one reported using concrete examples when coaching. And, another participant said that this session content helped him/her with guidance on how and when to hold conversations with staff.

Satisfaction with various EOS program aspects (n=21)

At least seven of ten participants reported high satisfaction levels ("very to extremely satisfied") with various program aspects including:

- Skillscope 360 assessment (that assesses key job-related skills essential for managerial success, 90%),
- NIAID specific content, cohort structure, and presentations (81% for each),
- EOS session locations (75%)
- Individual coaching sessions (70%).

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[4] Response alternatives for the question on overall satisfaction with EOS included "*not at all satisfied*", "*somewhat satisfied*", "*very satisfied*", and "*extremely satisfied*"; for perceived relevance, these were: "*very irrelevant*", "*somewhat irrelevant*", "*somewhat relevant*", and "*very relevant*"; and for learning expectations met and EOS objectives, these were: "*not at all met*", "*somewhat met*", "*well met*", and "*very well met*".

[5] The use of "balanced" response scales that use similar number of "favorable" and "unfavorable" response options are preferred for evaluation purposes. The scales used for the questions on overall satisfaction, learning expectations met, and EOS objectives were partial towards more favorable responses.

<u>Length of individual EOS program sessions (n=21)</u>

The program was structured to have a 1-day orientation followed by six, 3-hour sessions. For each of the 6 program sessions, participants were asked about their perceptions of appropriate time frames to enhance their learning of a given session content[6].

- Most frequently (43% to 65%), respondents preferred to have "3 hours once" allocated for each individual session, followed by "less than 3 hours" as their next preference (20% to 38%).

- Interestingly, comments offered in the assessments of individual sessions (administered at the end of each session) revealed some frustration among participants with the limited time devoted to the session and for related discussion. This was more evident for sessions "Setting Direction for your Unit" and "Employee Relations/Ethics". Some comments offered:

  Session: Setting directions

    *"Too much material, clear ideas come through, but felt rushed"*

    *"Seems like too much info for 3 hour time slot….but seems like we ran out of time"*

    *"[make the session] ½ hour longer".*

    *"I felt there was too little time for true discussion. I wonder if this relates to the time constraint, the number of people in the session, or the different management levels and experience of the participants . . . or probably all of the above."*

  Session: Employee relations & ethics

    *"More time devoted to both topics"*

    *"Have the ER section longer so it can go into more depth"*

    *"Have a longer session for employee relations."*

    *"Have a session on each topic separately – or somehow allow more time – increase time of class for this session."*

<u>Experience with EOS program structure (n=21)</u>

As mentioned above, the program was structured to have a 1-day orientation followed by six, 3-hour sessions, once a month for 6 months. With regard to length of the overall program, participants were asked about their preferences to have EOS "as is: once a month for 6 months"; "twice a month for 3 months", "combination of once or twice a month for 4 months" or "other".

- Most frequently, respondents preferred to have the program "twice a month for 3 months" (38%), followed by those who preferred "to leave as is" (33%).

- In their comments regarding overall length of the program, the perspective among most respondents was that having closer sessions would be helpful to facilitate learning, continuity of learning, and attending all sessions.

- A shorter time-frame (shorter than 6 months), include 1-day sessions for some topics (e.g., similar topics), and a fixed schedule were expressed often. Some comments included:

    *"I would prefer sessions closer together and on same day of the week at same time, if at all possible. Due to scheduling changes, I had to miss some sessions because of scheduling conflicts"*

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[6] Response alternatives for this question included *"less than 3 hours", "2 hours, in 2 separate sessions", "3 hours once"*, and *"4 hours once".*

*"The sessions were too spread out so that continuity was lost – and some of the topics could have used more time – I felt rushed especially during the activities where we worked in groups"*

*I think it would have been easier to connect the dots if sessions had been closer together. It seems a long time ago since the 1st day of orientation. I think impact would be better to bring closer together.*

*Once a month was good, but could lose momentum for some topics. Might consider blocks – same like sessions grouped together for 1 full or 1-2 day meetings then others 1x a month, also would be good to have 1 day retreat.*

- Participants also had specific comments regarding content and format of sessions noting the value of:
  - ⟳ Useful materials and references provided
  - ⟳ Appropriate session content for new managers
  - ⟳ Individual coaching
  - ⟳ Quality and experience of trainers
  - ⟳ Cohort nature of program that facilitated interaction
  - ⟳ Brown-bag sessions.

Recommendations for EOS program structure

Participants in the prototype also provided specific recommendations regarding the EOS program. Frequent recommendations were:

- ✓ Have senior speakers, including speakers from outside NIAID
- ✓ Extend individual coaching
- ✓ Incorporate real life case scenarios and case studies
- ✓ Include Myers-Briggs as content
- ✓ Have a full-day session off site to facilitate networking
- ✓ Make EOS mandatory for managers with 0-5 years of experience
- ✓ Have a repository of reference materials on the web and materials online
- ✓ Have sessions available on the web (for those not able to attend a session or would like refresher)
- ✓ Give participants assignments or small projects to work on (to refresh learning and facilitate networking)
- ✓ Have a convenient location (e.g., for intramural/campus staff) and make sure rooms are comfortable.

**Data Limitations**

It should be noted that this was not a rigorous, empirical evaluation of the EOS program. Thus implications from the prototype data analyzed have important limitations for several reasons. The main purpose of the assessment was to collect preliminary information on the prototype training content and satisfaction within its current format and structure.

Other important information such as knowledge acquisition of quality management skills critical to NIAID supervisory role due to EOS was not collected. Another limitation is that participant characteristics that can qualify some of the findings were not collected (e.g., demographics – attendance to other management trainings, Divisions they belong to).

Moreover, an individual's data could not be linked across surveys/forms; thus the evaluation was unable to determine for instance if those who provided examples of how they applied EOS content learned were managers with 0-5 years of NIAID supervisory experience or more experienced managers.

Finally, important methodological issues (e.g., very small number of people who participated in the prototype and provided evaluation data (e.g., sometimes only 5 participants), assessment scales used, and that the same contractor who designed and implemented the training also conducted the assessment (potentially introducing bias) affect objectivity and reliability of findings.

Nonetheless, the prototype data analyzed provides some preliminary insights and general tendencies about participants' experience with the EOS program such that program staff can use these findings to make some modifications to the program to improve its future success. In particular, the EOS program seems promising to:

- ✓ Enhance job function skills of NIAID managers and supervisors
- ✓ Meet professional development needs (e.g., resources, tools, strategies, practice) to facilitate management and supervision of NIAID employees engaged in scientific research.
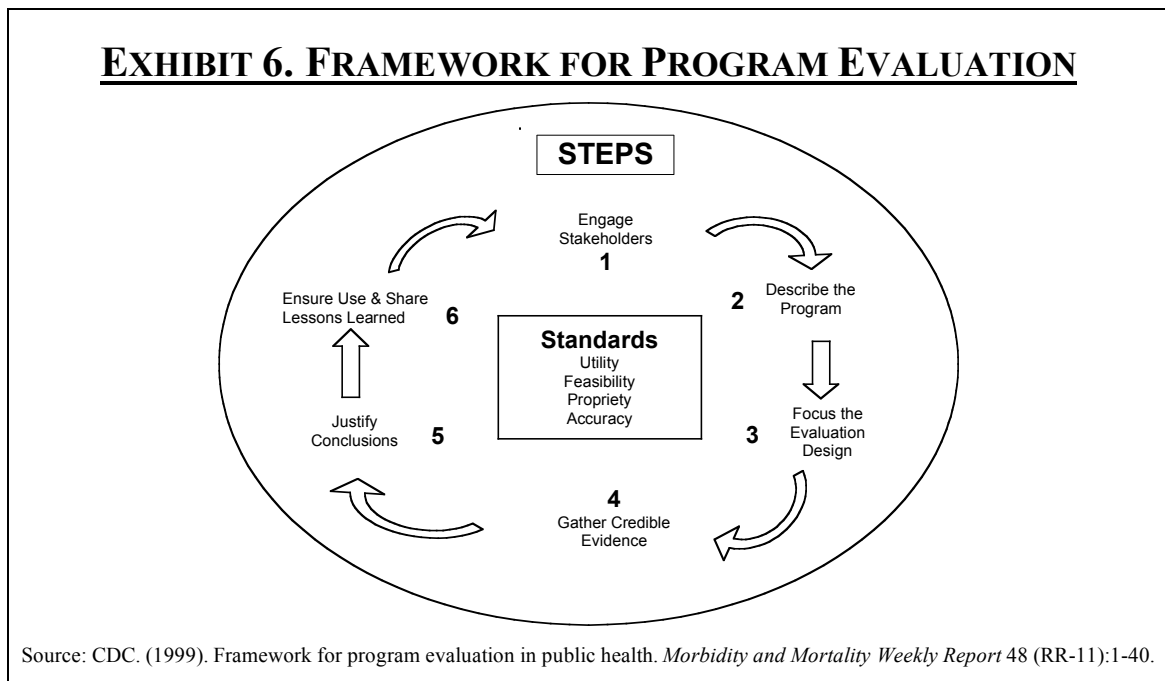

**Implications**

Importantly, collection of prototype data demonstrated feasibility of collecting data on implementation and outcomes of EOS. There are several implications from the prototype data gathered regarding ability to collect future evaluation data and usefulness of information collected:

- It is feasible and useful to collect quantitative and qualitative data for evaluation. For example, qualitative data obtained through the Plus/Delta discussion during the final session complements survey data gathered, providing information that helped better understand the implementation process and main recommendations.

- More critical and specific information on the EOS process and effects (e.g., knowledge of key management principles as a result of participating in EOS) can be gathered.

- Data gathered provided useful information for further content and format of EOS curriculum content and program structure.

- Required evaluation instruments (e.g., surveys) to collect relevant information on EOS can be identified or developed.

- EOS program participants can be targeted as participants in the evaluation

A systematic evaluation of EOS needs to rely on scientific method and high quality and accurate data to draw conclusions about the overall program impact. The next sections describe in more detail how to conduct a full-scale evaluation of EOS with rigor to minimize bias and prejudice in findings.

# Theoretical Evaluation Framework

The NOVA team followed the Centers for Disease Control and Prevention (CDC, 1999) prescribed steps in design of a comprehensive evaluation plan for NIAID EOS program (see Exhibit 6). This step-by-step approach is described to illustrate how it can result in a systematic evaluation of EOS that meets the needs of NIAID.

## EXHIBIT 6. FRAMEWORK FOR PROGRAM EVALUATION

**STEPS**

- Engage Stakeholders **1**
- **2** Describe the Program
- **3** Focus the Evaluation Design
- **4** Gather Credible Evidence
- **5** Justify Conclusions
- **6** Ensure Use & Share Lessons Learned

**Standards**
Utility
Feasibility
Propriety
Accuracy

Source: CDC. (1999). Framework for program evaluation in public health. *Morbidity and Mortality Weekly Report* 48 (RR-11):1-40.

# Evaluation Plan

## Step 1 - Engage Stakeholders

Key stakeholders are defined as individuals or organizations that have an investment ("stake") in what will be learned from an evaluation and what will be done with this information (CDC, 1999; Patton, 1997). Stakeholders are often experts in a program and understand how it can or should impact targeted audiences and/or national programs. The stakeholders should include members of the organizations that "bought into" the program. Three groups of stakeholders were identified:

A.  Primary participants of evaluation findings
- NIAID leadership and executives
  - Deputy Director for Science Management
  - Executive Committee and Division Directors (e.g., OWER)
- SPEB staff

B.  Those involved in EOS program operations
- LOD program staff
- EOS Design Team
- Consultant staff
- NIH and NIAID Subject Matter Experts – contributing and delivering program content

C. Those served or affected by the EOS program
  - NIAID managers and supervisors (secondary stakeholders)

Other key stakeholders may become involved when implementing a full-scale evaluation. The depth of involvement from stakeholders may range from minimal involvement (such as providing feedback on materials) to extensive involvement (such as completing tasks that have a direct impact on what the program does and accomplishes).

*Recommendation:*

- **The EOS OWER LOD Project Manager should ensure that appropriate stakeholders are involved in evaluation planning and implementation.** Key stakeholders of the evaluation include NIAID leadership and staff within OWER, LOD, and SPEB. Additional stakeholders may include members of an evaluation advisory committee, other NIAID Divisions supporting scientific research (e.g., Division of AIDS--DAIDS, Division of Intramural Research--DIR, Division of Microbiology and Infectious Diseases--DMID, and Division of Allergy, Immunology, and Transplantation--DAIT), as well as individuals from the research community conducting clinical trial studies.

- **Identify key stakeholders early in evaluation planning phase.** Early identification of key stakeholders facilitates development of an evaluation plan that will obtain information useful for stakeholders (e.g., to make decisions).

# Step 2 - Describe NIAID EOS Program

Description of a program includes its purpose and information regarding the way it is intended to function and the way it is actually implemented. A clear and accurate description of the program allows for a balanced assessment of strengths and weaknesses. In addition, it helps stakeholders understand how the program components fit together and relate to the overall goal. Program description includes delineation of the program theory (i.e., logic model) so that a common understanding of program goals, structure, connections, and expected outcomes exists. The logic model also assists in focusing evaluation design on the most critical program elements. The evaluation design is then applied to this model.

The NOVA team discussed goals and objectives of EOS and other issues relevant to the evaluation in early meetings with the NIAID LOD Project Manager and staff and SPEB staff. These meetings facilitated a mutual understanding of program purpose, anticipated activities, resources, expected effects, and context.

In addition, the NOVA team reviewed program documents and conducted a literature review of relevant studies on evaluation of management professional development programs and, specifically, on evaluation of trainings for managers supporting scientific research.

Little was found in the literature on evaluations of management development programs. Nonetheless research indicates that decisions on training and development programs are often made without benefit of systematic evaluation efforts. For example, according to the "New Supervisor Training Program Practitioner Consensus Survey" conducted in 2007, nearly half (47%) of 338 companies polled do not have a new supervisor training program in place (i4cp, inc. & HR.com, 2007). But most organizations (77%) who have a new supervisor training program consider it important enough to make it mandatory, investing considerable resources into it. Paradoxically, most companies (57%)

with this training program do not measure their effectiveness which is of concern as expressed by a spokesperson from the company sponsoring the survey:

> *"A lot of companies just go on faith…. it's amazing that more companies don't even try. Can you imagine if we applied the same principle to quality control in our manufacturing processes? We'd make some of the worst products on earth."*

Research by McGivern and Bernthal (2004) highlight the rationale for evaluating training programs (Exhibit 7).

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**Exhibit 7. Reasons for Measuring Training and Development Activities**

☞ To make sure the curriculum is taking the organization in the right direction.

☞ To determine whether the actions being taken or behavior changes resulting from the training align with the business case or the reasons for the change.

☞ To justify the costs of the training and development curriculum that were chosen to enhance change initiatives.

☞ To provide base-line measurements that can identify favorable or unfavorable trends with respect to the training curriculum and the organization's goals and objectives.

☞ Measurement information can help management identify gaps and give them the tools to decide whether to stay the course or change direction.

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A summary of findings of the literature review is included in **Appendix C.** The summary includes other findings and recommendations using Kirkpatrick's model framework.

## *2.1. Evaluation Program Theory (Logic Model)*

Based on input from the NIAID LOD Project Manager and staff and SPEB staff, a program logic model was developed to provide a synopsis of the EOS program. The model shows relationships among major project aspects, activities and outputs envisioned by the program, and desired outcomes associated with program activities. It provides a logical sequence of how resources invested by OWER LOD will lead to program refinements and desired results. A logic model generally has the following elements: program inputs, activities, outputs, short-term outcomes (0-3 years), intermediate outcomes (3-5 years) and long-term outcomes (>5 years). Exhibit 8 shows the logic model developed for the EOS program evaluation.

> *Recommendation:*

> ➢ **The program logic model needs to be reviewed annually so that it accurately reflects program changes.** An effective logic model is refined and changed many times throughout the evaluation process as staff and stakeholders learn more about the program, how it operates, and why it works. This process aids in adjusting approaches and changing course as the EOS program evolves over time.

# EXHIBIT 8: NIAID EOS LOGIC MODEL

**Overall goal**: The overarching goal of the Essentials of Supervision (EOS) training program is to enhance early stage supervisors/ managers skills (0-5 years NIAID supervisory experience) to effectively support and facilitate conduct of good science within NIAID.

| CONTEXT | IMPLEMENTATION | | OUTCOMES | | |
|---|---|---|---|---|---|
| Resources/Inputs | Activities | Outputs | Short-term (0 – 3 years) | Intermediate (3 – 5 years) | Long-term (> 5 years) |
| • LOD team<br>• EOS Design Team<br>• SPEB staff<br>• Consultant staff<br>• NIAID funding<br>• EOS prototype participants | **Curriculum Development**<br>• Develop and refine learning objectives<br>• Review course content<br>• Obtain input from Design Team<br>• Implement prototype<br>• Modify EOS training based on findings from prototype<br><br>**EOS Implementation**<br>• Design plan to train all NIAID managers with 0-5 years of supervisory experience at NIAID.<br>• Identify target population (managers with 0-5 yrs of supervisory experience)<br>• Design marketing & advertising plan to promote EOS training<br>• Implement EOS training plan | • Completed EOS curriculum<br>• Number of targeted managers who sign up for the training<br>• Number of trainings conducted with targeted managers<br>• Number of targeted managers who complete the training curriculum. | *Reaction to Training*<br>• Targeted managers are satisfied with the training (e.g., content, cohort approach, opportunities for networking, resources and materials)<br>• Targeted managers perceive the EOS training as relevant and transferable to their work setting (e.g., EOS increases understanding of how good mgt at NIAID supports science)<br><br>*Learning*<br>• Targeted managers demonstrate increased knowledge of good management qualities and skills (e.g., NIAID structure) | *Transfer of Knowledge*<br>• Increased application of learned EOS good management qualities and skills to support scientific research and research administration<br>• Increase use of collaborative problem-solving approaches among trained managers | *Impact*<br>• Improved relationships (better interactions, communications) between managers and staff conducting NIAID funded scientific research<br>• Perceived supportive environment (e.g., efficient, helpful, appreciative) for scientific research among those conducting NIAID funded scientific research |

## Contextual Factors

(E.g., other types of supervisory development programs, years of experience in supervisory role, and knowledge, expertise and understanding of NIAID Supervisors by contracted facilitators)

### 2.2. Outcomes of Interest to the NIAID EOS Program

The evaluation plan focuses on two different but related aspects of the program specified in the logic model: *formative* aspects that reflect implementation of planned program activities (also referred to as *progress* or *process*) and *summative* outcomes that reflect expected short- and long-term program effects (also referred to as *outcomes*).

Common formative indicators or *outputs* describe program operations and elements of change that are precursors to system changes and contribute to evaluation of summative outcomes (end-of-program). The evaluation of formative aspects assesses the extent to which EOS is being implemented as planned (e.g., dissemination plan) and measured on a regular basis (e.g., quarterly, annually). In addition, the evaluation seeks to measure summative changes brought about by the program in outcomes of interest (e.g., gain in knowledge of management skills). As mentioned earlier, outcomes of interest identified for the evaluation are in line with Kirkpatrick's model (see the logic model in Exhibit 8 above for outcomes).

# Step 3 - Focus Evaluation Plan

A focused plan increases chances that the evaluation will succeed in providing direction and determining what steps are practical and cost-effective. Among items to consider when focusing an evaluation are purpose, participants, uses, advisory committee, evaluation questions, benchmarks/indicators, and methods.

### 3.1. Purpose

The purpose of evaluation is to consistently measure relevance and effectiveness and to produce meaningful reports to stakeholders of interest, both within and outside NIAID (e.g., other Institutes within NIH). The ultimate goals of evaluation are to assess effectiveness of EOS training to support NIAID scientific research.

### 3.2. Participants

Key stakeholders should be asked to review and prioritize evaluation questions, methods, and intended uses of the evaluation to prevent it from becoming misguided or irrelevant. To focus the evaluation, NIAID staff and the Evaluation Contractor need to work with other key stakeholders to prioritize areas to address in the evaluation plan. Based on these priorities, feasible evaluation strategies can be refined and integrated into a full-scale evaluation plan.

### 3.3. Uses

Results of this evaluation will be used for multiple purposes, including making appropriate program refinements (e.g., modifying curriculum content, instructional strategies) as information on program operations is gathered regularly; making decisions regarding continuation of program (e.g., mandatory for managers with 0-5 years of NIAID supervisory experience) and funding; and providing lessons learned that can be applied to training programs similar to EOS (e.g., can be a good refresher course for more experienced managers). Likewise, information gathered on barriers and facilitators of desired behavioral changes can help identify issues that can be corrected or that need further examination.

### 3.4. Advisory Committee

An Evaluation Advisory Committee should be used for evaluation of EOS. This Committee serves both technical and practical functions. It provides expertise and recommendations to focus the scope

of the evaluation, methodologies, and data collection instruments, and to identify contextual circumstances to consider.

*Recommendations:*

➢ **Form an Evaluation Advisory Committee early on to advise on technical and practical functions of the evaluation.** The Committee needs to consist of members with relevant experience. At a minimum, it should have members with experience in evaluation (i.e., evaluation of management development programs, evaluation of transfer of learning, adult learning strategies), NIAID management competencies and skills needed (e.g., members from EOS Design Team), adult learning strategies, and other related knowledge and experience.

➢ **Define Committee's goals and members' responsibilities.** Evaluation Advisory Committee members should be clear about the Committee's purpose, their roles and responsibilities, and estimated number of meetings and time commitment per year.

## *3.5. Evaluation Questions*

Evaluation questions establish boundaries by stating what aspects of the program will be assessed. The process of identifying potential information needs often results in more questions than can be addressed in a single evaluation effort. A comprehensive look at potential evaluation questions will allow for informed choices when selecting questions.

Both process and outcome evaluation questions were developed by the NOVA team for a full-scale, systematic evaluation of EOS. Answers to process evaluation questions will provide information that can be shared quickly to improve the program, as these questions focus on program activities, challenges, and outputs for the purpose of monitoring progress and making midcourse corrections, when needed. Answers to outcome evaluation questions will provide information on short-term and long-term changes and challenges. The following process and outcome evaluation questions were identified during the feasibility study; they are organized according to a focus on process or outcomes and use Kirkpatrick's model.

Process Evaluation Questions

    ❧ Was the EOS implementation program plan to train managers with 0-5 years of supervisory experience (EOS participants) carried out as planned?

    ❧ What barriers were encountered, courses of action to address barriers, and best practices were identified during the implementation of the EOS program?

    ❧ What are common barriers and facilitators of effective management practices in the NIAID work-setting among EOS participants?

    ❧ What supervisory/management component activities do NIAID managers with 0-5 years of supervisory experience perceived were not addressed completely or at all during the training?

Outcome Evaluation Questions

*Reaction to EOS Professional Development Program*

    ❧ How satisfied were participants with the EOS program and learning experience?

    ❧ How relevant and transferable is the EOS program content to participants' work setting?

*Learning of EOS training content*

&#x0A6;&#x2026; To what extent did EOS participants increase their knowledge, skills, and use resources associated with good management at NIAID as a result of the EOS program?

*Transfer of knowledge/skills learned through EOS*

&#x0A6;&#x2026; To what extent did EOS participants change on-the-job behavior related to management approaches and practices?

&#x0A6;&#x2026; Is there an increase in application of effective management related behaviors learned through EOS over time among EOS participants?

&#x0A6;&#x2026; Is there an increase in use of collaborative problem-solving approaches among EOS participants?

*Results/Impact of EOS*

&#x0A6;&#x2026; Is an increase in use of effective management skills learned through EOS associated with a supportive environment for scientific research and research administration?

### 3.6. Benchmarks and Performance Indicators of EOS Program Effects

Quality evaluations include assessments that describe criteria for success. Benchmarks or indicators of program performance are necessary to establish the extent to which the program is accomplishing what it set out to do in terms of process (e.g., outputs) and outcomes (e.g., change in management related knowledge). Benchmarks and corresponding performance indicators will help answer questions such as: "Is the program moving toward anticipated goals? Do EOS participants demonstrate adequate knowledge of management tools, skills, strategies?" Performance indicators are also useful to monitor ongoing program status against a set of targets (program objectives/goals). Based on set benchmarks, an alert system for unexpected developments or lack of progress can be built into the evaluation plan. This can help key stakeholders (e.g., NIAID program management) review how the program is operating, whether progress is as expected, and whether there are issues or problems that need to be addressed.

*Recommendation:*

&#x27A2; **Establish realistic benchmarks for process and outcome indicators of EOS success.** Expert opinion of program staff and characteristics of participants often determine the benchmarks or indicators of success for each program goal. For example, results from the AOL training and preliminary assessment of EOS prototype can provide some insights on appropriate benchmarks for EOS.

### 3.7. Timeline

Several factors are considered when determining the nature and scope of a program evaluation. Program characteristics (e.g., intended targets, outcomes of interest, locations), evaluation questions, scale (size, time period) of the evaluation, and other practical considerations (e.g., resources, maturity of program).

NIAID EOS is a new program that will benefit from a comprehensive evaluation because of its potential impact to facilitate conduct of science within NIAID. The assessment of process and outcomes and short- and long-term goals needs to consider enough time so that expected outcomes (e.g., transfer of management skills and strategies learned) are measured at the right time. A

comprehensive, reliable evaluation is dynamic, expanding and/or switching its focus and activities as the program develops over time to ensure a fair assessment of program effects.

*Recommendations:*

➢ **Plan for a 5-year evaluation.** A 5-year plan is an appropriate time period to comprehensively assess EOS. The evaluation should also plan for incremental steps in its scope (e.g., to ensure adequate sample size, elapsed time to assess behavioral changes). The first 2 years of the evaluation can focus on *Reaction to training* and *Learning of training content,* and move progressively on to *Transfer of knowledge,* and then *Impact of EOS.* The collection of longitudinal data over a reasonable period of time (e.g., 4-5 years) can better document behavioral changes and impact that often take longer to occur.

### 3.8. Evaluation Planning Matrix

An Evaluation Design Matrix is a useful organizational tool that flows from the program Logic Model. It typically includes program evaluation questions, type of data needed to answer evaluation questions, methods to be used, data sources, data analysis, limitations of findings, and knowledge gained from the evaluation.

*Recommendations:*

➢ **Develop a detailed evaluation planning matrix.** A matrix, such as the one displayed in Exhibit 7, specifies evaluation questions relevant to EOS, data required for assessing progress and methods for evaluating short- and long-term outcomes.

### EXHIBIT 7: EVALUATION PLANNING MATRIX EXAMPLE

| Evaluation Questions | Information Required | Data Source(s) | Data Collection Methods | Data Analysis | Limitations | What will analysis tell? |
|---|---|---|---|---|---|---|
| To what extent did EOS increase participants' knowledge, skills, and resources associated with good management? | Knowledge of mgmt. principles, strategies, & resources<br><br>Application of EOS content to real-life scenarios | EOS participants<br><br>Comparison group | Pre- & post-tests | Descriptive, comparative, & correlational analyses | Self-reported data | Change in knowledge (increased) due to EOS |

### 3.9. Methods

A mixed-method approach using quantitative and qualitative evaluation measures strengthens overall evaluation design by allowing for more precise statistical measurement in quantitative components and in-depth insight in qualitative components. For example, quantitative data can produce estimates of satisfaction with and perceived relevance of EOS among participants and knowledge of key management principles. Surveys are commonly used to collect quantitative data and are administered in a variety of ways (e.g., in-person, telephone, Internet).

On the other hand, qualitative data helps gain a better understanding of issues and evaluation findings. Techniques for gathering qualitative information vary greatly (e.g., in-depth individual interviews, group interviews). Collecting both quantitative and qualitative data will help better answer evaluation questions.

*Recommendations:*

➢ **Use quantitative and qualitative data collection methods.** Use a mixed-method evaluation design of qualitative and quantitative techniques to obtain a full picture of EOS effects. The prototype data collected demonstrated that a mixed-method approach can be useful to gather information on participants' experience with EOS.

➢ **Ensure appropriate sample sizes to determine statistical significance of quantitative results.** The traditional approach to determine program effects based on quantitative data analyses is statistical significance. Statistical significance is compromised by small samples. The use of power analysis (for effect size) that specifies sample size to determine statistically significant changes (e.g., enhanced knowledge of management strategies from pre- to post-test) is recommended. For example, each EOS cohorts consists of about 25 participants; data can be collected on several EOS cohorts (at least 2 per year for 2 years) to obtain an appropriate sample size for the evaluation.

➢ **Minimize respondent burden and ensure confidentiality or anonymity of sensitive personal information**. Data from tests can be obtained unobtrusively through system devices that ensure data integrity and meet DHHS/NIH requirements for data confidentiality and security.

# Step 4 - Gather Credible Evidence

Collecting data through a mixed-method approach from various key sources that address program implementation and outcomes facilitates collection of credible evidence. Data obtained from various sources and through different methodologies will convey a well-rounded picture of the program and a general overview of EOS program effects to be used by the evaluation's primary participants to draw conclusions and make informed decisions. Though all types of data have limitations, multiple procedures (e.g., qualitative, quantitative, surveys, individual interviews, group interviews) for gathering, analyzing, and interpreting data enhance quality of the data (CDC, 1999). The collected information will present a clear and reliable picture of EOS program effects to facilitate improved NIAID scientific research.

## *4.1 Data Sources*

A variety of sources can provide the necessary information for the evaluation. Program records, NIAID EOS program staff, NIAID non-program staff, program targeted audiences (e.g., managers with 0-5 years of NIAID supervisory experience), and key informants are some sources of data that will be used for a comprehensive evaluation of EOS. Next, is a description of the data that will be collected. The way(s) in which these data will be used to answer evaluation questions needs to be outlined in the Evaluation Matrix (see 3.8. Evaluation Planning Matrix). Final versions of data collection instruments will be developed and implemented with input from NIAID EOS program staff and the Evaluation Advisory Committee.

### 4.1.1. Program Database

A NIAID EOS system database will be developed by the Evaluation Contractor to enter data on several program aspects such as: 1) participant's demographics (e.g., years of NIAID supervisory experience, Division association within NIAID, previous experience with management trainings, and role in management of NIAID-sponsored scientific research); 2) number of participants per program

and per session; and 3) course completion rates. Data for the evaluation will be aggregated to protect confidentiality and anonymity of participants.

*Recommendations*:

➢ **Create a unique identifier for each participant (ID)**. The individual's ID should not include any personal information that can identify a participant. All data entered into the database needs to include only the participant's ID (e.g., no names, position, social security number, telephone number, etc.).

➢ **Collect EOS participation data.** These data (e.g., number of participants at the beginning of an EOS training course and who attend each session) will help assess awareness, interest, and engagement with the program (or problems with program scheduling or other program characteristics).

#### 4.1.2. Management Knowledge Test

The use of a knowledge test will assess the extent to which participants learned EOS program content regarding NIAID-relevant high-quality management (Kirkpatrick's second model component – learning). A knowledge test will help demonstrate if participants met overall program learning objectives. This test can include items on key knowledge expected to be acquired (e.g., specific management tools, particular information about employee ethics, main NIAID regulations when supervising scientific research). The test can also include case scenarios as proxy indicators for potential transfer of learned knowledge. In addition, knowledge tests for each individual EOS program session are also of value to assess knowledge acquisition for each session's learning objectives. Knowledge attainment due to the EOS program are better assessed when pre-post tests are administered because data on change (from pre- to post-tests) can be better linked to the EOS program (a more detailed discussion of appropriate methodologies to measure change due to EOS is included in section **Answering Evaluation Questions, Program goals, Goal 2)**.

*Recommendations*:

➢ **Identify a reliable and validated knowledge test.** A valid and reliable test ensures accurate assessment of a construct (e.g., knowledge, not motivation) being measured. An existing valid measure can also be adjusted to reflect content delivered through EOS.

➢ **Collect pre- and post- tests.** Administering the knowledge test before the first EOS session and at the end of the final session will provide information on any knowledge change that might be a result of participating in EOS. Likewise, knowledge tests for each individual session will provide specific information on participant's strengths and weaknesses regarding topics.

➢ **Include item-level responses by user ID**. Collecting data by user ID for both pre- and post-knowledge tests helps better assess changes in knowledge.

#### 4.1.3. Participant Satisfaction Survey

NOVA provided comments on the participant feedback form that was used by CPS to assess participants' overall experience with the EOS prototype. While most comments were incorporated in the final survey, NOVA's latest version (e.g., with use of "balanced" response options scales) is included in **Appendix D.**

Items primarily reflect Kirkpatrick's first component, reaction (e.g., satisfaction with program content, structure, and format) and answer related evaluation questions. Items address level of satisfaction (e.g., with stated EOS learning objectives), perceived usefulness of training to facilitate NIAID supervision/management (e.g., EOS increases understanding of how effective management at NIAID supports  science),whether participants' learning expectations were met, and specific aspects of the program structure and format (e.g., program content, cohort approach, Skillscope 360 assessment, coaching, opportunities for networking and collaborative problem solving, resources and materials available for each topic area).

### 4.1.4. Group interviews with EOS Participants

Group interviews discussions allow for in-depth probing of pertinent topics. The purpose of conducting group interviews with EOS participants is to gain a more thorough understanding of critical issues regarding EOS (e.g., learn when EOS content is more likely to be applied in the workplace and under what circumstances, facilitators/inhibitors of applying learned skills, and clarify results from Satisfaction Survey). Data from group interviews and the Satisfaction Survey will help identify successes, processes that led to these successes, and recommendations to improve the EOS program.

*Recommendations*:

➢ **Conduct at least 2 group interviews with different cohorts.**  At least two group interviews should be conducted (e.g., one with a different cohort) to get data from different perspectives on issues and where they intersect among EOS participants.

### 4.1.5. Application of Knowledge Learned in the Workplace setting

A form was used during implementation of the EOS prototype to obtain information on actual application of EOS program content in the workplace setting. Participants were asked to provide examples of knowledge transfer for each EOS session. However, only five participants submitted the form. Regular monitoring of how knowledge is applied over time is challenging to measure.

*Recommendations*:

➢ **Identify incentives to facilitate monitoring of the application of knowledge.** Consider the use of incentives to have participants monitor and report instances (in the form) in which EOS related knowledge learned was applied or helped to understand a situation. For instance, this form can be part of participants' annual performance review to describe how they applied EOS program related information; this information is then sent to EOS program staff.

### 4.1.6. Interviews with Supervisors of EOS participants

The purpose of conducting these interviews is to gain insights about any change(s) that participants' supervisors noted in their subordinate managers' actions (e.g., how decisions are made to support NIAID scientific projects, use of new more effectives strategies, or approaches to problem solving). Data from the forms on knowledge application and interviews with EOS participants' supervisors will provide some data about EOS impact to support improved NIAID scientific research. Interviews can be conducted more than once to measure retention of changed practices over time (e.g., long-term application of learning?

*Recommendations*:

➢ **Interview EOS participants' supervisors at points in time after their managers completed the program.** Transfer of knowledge involves behavioral changes that often take longer to take place and influence other outcomes (e.g., impact in environment to support NIAID funded science). It is likely that supervisors of trained managers may be able to see changes (and possibly) impact once new behaviors have been in place for some time.

### 4.1.7. Group interviews with staff that interacts with NIAID managers

The purpose of conducting group interviews with staff who interact with EOS trained NIAID managers is to gauge staff perceptions regarding EOS participants management practices and strategies (e.g., communication styles) when interacting with staff. These group interviews can be conducted some time after managers have participated in EOS, so that staff can relate any change(s) in management practices/styles they have perceived and if these changes reflect EOS program content (transfer of program knowledge to the workplace).

### 4.1.8. Interviews with NIAID funded researchers

These interviews will allow getting information on the level of support that NIAID-funded researchers experience with NIAID managers. Interviews can be with funded researchers who interact with (a) trained EOS managers and (b) non-EOS trained managers to see if there are differences in their responses that might be associated with the EOS program experience.

*Recommendations*:

➢ **Interview NIAID funded researchers some time after EOS participants have completed the program.** Changes in the environment to support NIAID scientific research reflect impact of EOS training, which are long-term goals taking some time to be evident.

## *4.2. Data Collection and Analysis*

### 4.2.1. Quantitative Methods

Analysis of quantitative measures will begin with descriptive statistics (e.g., frequencies, means, cross-tabs) to characterize data and answer evaluation questions related to the EOS program. Other quantitative analysis will focus on aspects related to training participation and content. These data should be examined quarterly to monitor progress and detect any problems that require prompt intervention (significant declines in participation rates). More complex analyses and causal modeling, such as analyses of variance and regression analysis, may be possible depending on quality and quantity of data. If data support these more complex analyses, these would be performed as part of the evaluation.

### 4.2.2. Qualitative Methods

Qualitative data (e.g., from group interviews and interviews) should be transcribed verbatim. These data should be analyzed and interpreted using content analysis in which main ideas, comments, and words are grouped based on variables of interest (Patton, 2001). To maximize reliability, coding (i.e., categorizing) of data and thematic analysis of text should be conducted by a minimum of two experienced evaluators. Qualitative software, such as ATLAS.ti, should be used for these analyses.

### 4.2.3. Clearance Requirements

All necessary permissions and clearance need to be in place before collecting data from evaluation participants. Paperwork Reduction Act requirements must be met and clearance must be obtained from the U.S. Office of Management and Budget (OMB) if data will be collected from ten or more non-federal employees such as when conducting interviews with extramural NIAID-funded researchers. Other data collection efforts require compliance with Privacy Act requirements and/or Institutional Review Board (IRB) approval.

*Recommendations*:

➢ **Submit paperwork to obtain OMB clearance early in the evaluation planning.**
The process to obtaining OMB clearance prior to collecting data among more than 9 non-federal employees takes time, often requiring at least 6-9 months.

### 4.2.4. Data Integrity

To obtain valid and reliable data, it is important to use instruments with shown psychometric properties. To the extent possible, quantitative data collection instruments, such as the *Management Knowledge Test* and *Participant Satisfaction Survey,* need to be measures with demonstrated validity and reliability to ensure the appropriate assessment of constructs of interest. Pilot-testing of instruments and procedures is an important step for data integrity. Likewise, procedures that ensure systematic analysis of data need to be in place to reduce bias in reported findings and interpretation of results.

*Recommendations*:

➢ **Use data collection instruments with demonstrated psychometric properties.**
(See recommendation in 4.1.2. Management Knowledge Test). The Satisfaction Survey developed during the prototype phase can be a good start to assess satisfaction with EOS (with recommended changes – see section 4.1.3. Participant Satisfaction Survey) if another measure that has been extensively validated is not available.

➢ **Pilot test new instruments and procedures.** This will help discern the appropriateness of the measures used and methods employed to collect the data and make corrections before the main data collection (and save resources).

➢ **Develop protocols for data collection.** Protocols that specify how data should be collected, tests administered, and focus groups/interviews conducted need to be in place to guide all data collection efforts. These protocols with step-by-step details help standardize procedures and reduce bias when gathering data. All data collectors need to be trained with these protocols to homogenize their data collection actions.

➢ **Develop protocol for qualitative data analysis.** Due to the subjective nature of qualitative data, it is important to have guidelines for content analysis to reduce individual bias. Having more than one coder of data, regular checks of coded data, and examining inter-rated reliability when coding, are essential procedures to obtain reliable information.

### 4.2.5. Ethical Considerations

Interviews and focus groups will be digitally recorded and transcribed verbatim. All recordings and transcripts should be kept as electronic files on a physically and electronically secure server. Field notes from observations and paper documents should be kept in a locked file cabinet in a locked

office. Quantitative data should also be kept in a secure location. All survey responses should be kept confidential. Participants should be given a respondent identification number. Answers to surveys should remain confidential. All data will be entered in a password-protected computer data file. The computer and files will be kept in a locked office. The following procedures need to be in place to ensure protection of human subjects participating in the evaluation: Prior to completing any survey or participating in any interview or focus group, participants will be given information explaining purpose of the evaluation, risks and benefits, costs, confidentiality, and voluntary nature of the evaluation, as well as name and contact information of the evaluator. Participants will be informed that participation in the evaluation is completely voluntary and confidential. Participants' responses will be combined with those of others and summarized in an aggregated way in any report or publications. No names or any identifying information will be included in any report of the evaluation data.

# Step 5 - Justify Conclusions

NIAID EOS Program staff, Program Branch Chief and key stakeholders should work together with the evaluator to determine interpretations and conclusions supported by evidence gathered. Findings from the evaluation of EOS effects should be judged against desired performance indicators (benchmarks) identified by key program stakeholders. Conclusions on the basis of evidence gathered and analyzed include comparison of program objectives (predetermined measures of success) with analysis and synthesis of information, interpretation of evidence, and recommendations for consideration (CDC, 1999; Patton 1997). When appropriate, conclusions will be strengthened by: (1) summarizing plausible mechanisms of change (e.g., participation in the EOS program led to knowledge of key management skills and strategies and its likely use in the workplace setting); (2) delineating temporal sequences between activities (e.g., program participation) and effects (e.g., increased knowledge of management approaches and tools); and (3) showing that program effects can be repeated.

# Step 6 - Ensure Use and Sharing of Lessons Learned

The evaluation process assumes that stakeholders are aware of the overall design of the evaluation (e.g., goals, procedures, methods), implementation, and findings to facilitate use of results when implementing decisions or actions that affect the program (evaluation findings provide a rationale and evidence to substantiate decisions). The process to evaluate a program includes designing the evaluation to answer evaluation questions; providing feedback to stakeholders regarding interim findings; and disseminating to stakeholders procedures used and lessons learned from the evaluation (Patton, 1997).

Annual and summative evaluation reports would be submitted to NIAID. Feedback from stakeholders and other participants of this evaluation is necessary to ensure usefulness (and application) of findings. As directed by the NIAID Program Manager, dissemination of lessons learned may include support for writing manuscripts, preparing presentations (e.g., content, slides, handouts), or developing other tailored dissemination  strategies to meet the needs of stakeholders.

# Answering Evaluation Questions

In order to answer EOS program evaluation questions specific information on key variables is needed. Data on key variables will be used to develop and interpret findings, and prepare recommendations and lessons learned about the EOS program.

# Key Variables

Information on key variables to answer the EOS program evaluation questions include program resources, population characteristics, program activities, external factors, and program goals.

### 1.1. Program Resources

This information includes the amount of funding, human capital, infrastructure, and other resources allocated to the EOS program. EOS program resources include EOS funding, LOD staff participation, EOS Design Team participation, and NIAID contractors' participation. Data on these variables will need to be provided by EOS program staff to the evaluation contractor.

### 1.2. Population Characteristics

These variables describe characteristics (e.g., demographics) of program participants that may be related to program success. Examples of EOS target population variables to include are participants' years of NIAID supervisory experience, years of other management/supervisory experience, other previous management formal training, management/supervisor position, number of employees supervised, type(s) of programs managed/administered and size of portfolio, and physical location. These data should be available through the EOS program participation database.

### 1.3. Program Activities

These variables depict program operations, processes, or other critical activities. Related variables for EOS include the program implementation plan and program modifications. These are primarily process data that can be collected through forms that gather data on planned activities (e.g., dissemination activities to inform new audiences), whether objectives were met (e.g., number of times EOS was offered per year), barriers found during implementation, decisions to address barriers, program modifications, and lessons learned in the process. These data will need to be collected from EOS program staff by the evaluation contractor on a regular basis (e.g., quarterly).

### 1.4. External Factors

External factors are conditions or circumstances beyond control of program staff that may influence program implementation. These variables provide a context for interpreting data gathered throughout the evaluation. For example, a study on transfer of training knowledge to work found that the most influential factor to actual transfer of learned training content back in the workplace was the trainee's boss management style (e.g., open, supportive of change, embraced training program) (Huczynski et al, 1980) (see **Appendix C**, Literature Review summary of findings).

EOS program variables include problems encountered during implementation of the training (decisions made to address them, lessons learned); perceived reasons for program success or lack thereof; considerations to make EOS mandatory for managers with 0-5 years of NIAID supervisory experience, and unexpected positive and negative events occurring during the period under examination. Forms used to monitor program activities will also collect these data and will need to be provided by EOS program staff to the evaluation contractor on a regular basis (e.g., quarterly).

### 1.5. Program Goals, Performance Measures, and Comparison Measures

These variables are interrelated and focus on the program's outputs (from implementation activities) and outcomes (effects in the target population, in the workplace environment). As mentioned earlier, Kirkpatrick's four components (reaction to training, learning of program content, transfer of learned program content to the workplace setting, and impact on creating a supportive environment for scientific research) are main evaluation outcomes. Information from each prior level (component) serves as the basis for the next level's evaluation, with each successive level representing a more precise measure of training effectiveness. To the extent possible, each outcome is associated with performance and comparison measures. Based on the EOS Logic Model (**Appendix D),** learning about program participant satisfaction with the program and its effectiveness to enhance their knowledge of NIAID structure, tools, strategies, and approaches to effectively support scientific research are important short-term program goals. The expected behavioral changes in application of learned skills and knowledge in the workplace setting and impact on support to conduct NIAID scientific projects are intermediate and long-term goals, respectively.

**Goal 1:** **EOS program participants have favorable reactions to the program**
(Short-term outcome goal, *Reaction to training*)

The accomplishment of this program goal can be evaluated by examining whether:

- EOS managers are satisfied with the program including content (e.g., set learning objectives, participants' learning expectations), structure (e.g., cohort approach, opportunities for networking and collaborative problem solving), resources and materials available for each topic area, and other aspects (e.g., Skillscope 360 assessment, individual coaching, training location, training room characteristics).

- EOS managers perceive that the program is relevant to their job supervisory/management tasks (e.g., EOS increases understanding of how good management at NIAID supports science, provides tools and strategies that are applicable to their tasks).

*Performance Measures:* Average ratings from the Participant Satisfaction Survey on overall satisfaction, perception of relevance and transferability of EOS content, and other aspects related to EOS structure and format. The survey will be administered at the end of the training (**Appendix D**).

*Comparison Measures:* Set criteria for acceptable ratings from the Participant Satisfaction Survey on overall satisfaction, perception of relevance and transferability of EOS content, and other aspects related to EOS structure and format.

*Recommendation:*

➢ **Set benchmarks for expected ratings on overall satisfaction with EOS.** Set criteria should specify (a) minimum rating score that would demonstrate EOS satisfaction and (b) expected proportion of participants expected to score at least the minimum satisfaction score. Analysis of prototype data can provide some indication on expected benchmarks. For example, data analysis showed that 80% of prototype participants reported high satisfaction levels ("very to extremely satisfied") with the overall program. Given improvements to be performed to EOS as a result of the experience with the prototype, an 80% benchmark for overall satisfaction can be set as an acceptable performance indicator for future trainings.

*Implications of Evaluation Design*

- Survey findings may indicate the need to make significant changes in the training, ranging from content to system design. EOS program staff need to be aware about evaluating program aspects amendable for change.

  *Recommendations:*

  ➢ **Collect data that will be used to improve the EOS program.** Survey items should collect information that will be of use to EOS program staff and stakeholders to make decisions regarding the program (e.g., expand it, making it mandatory) or suggested continuing program modifications.

**Goal 2:     EOS increases program content knowledge**
          (Short-term outcome goal, *Learning*)

Accomplishment of this program goal can be evaluated by examining whether:

- EOS participants demonstrate higher levels of knowledge of program content (e.g., key EOS sessions content regarding management practices, tools, strategies) at the end of the training compared with before training.

- EOS participants demonstrate higher levels of knowledge of program-related content than targeted audiences who did not participate in EOS.

*Performance Measures:* Pre- and post-tests with EOS participants to determine whether they are more knowledgeable about EOS management related content after completing the program than before.

*Comparison Measures*: Pre- and post-tests instrument administration with a group of EOS targeted audiences who have *not* taken EOS (control or comparison group).

***Evaluation Design Options***. In program evaluation, an **experimental design** in which participants are randomly assigned to program and control groups provides the highest degree of confidence to draw causal inferences in outcomes (e.g., EOS is an effective program to increase knowledge of key management principles and strategies to support NIAID conduct of good science among managers with 0-5 years of NIAID supervisory experience). A control group consists of members from the program target audience that had the same chance as program participants to receive the program but, due to random assignment, were assigned to a group in which the program was not delivered (at least temporarily). The idea is to have groups that are equivalent to eliminate bias in results based on members' characteristics. It follows that a larger difference in EOS management related knowledge scores (from pre- to post-test) accomplished by the program group compared with the control group indicates that the EOS program is most likely the cause for the increase.

It is not always feasible to use an experimental design due to practical, ethical, legal, and cost issues. In fact, current plans to implement EOS involve conducting the program twice a year with cohorts of about 25 participants each time in which a first-come first-serve approach will determine who participates in a given cohort. Interested individuals who did not sign in on time for a cohort will be included in a "waiting list" for the next implementation of EOS. The next best approach to an experimental design is a **quasi-experimental design** in which random assignment to program and control groups is not an option, but which can still allow for scientifically rigorous assessment of outcomes. A quasi-experimental evaluation design is a more viable option to assess EOS program outcomes.

Two main factors will influence the quasi-experimental design to be implemented: (a) having a pretest (before the program is delivered) and (b) existence of a comparison group. A comparison group is an alternative to a "control group" when the latter is not possible (e.g., random assignment). A comparison group is similar to a control group in that the comparison group does not (or minimally) receive the program under evaluation (EOS). An appropriate comparison group to evaluate EOS is those individuals who signed-up on the waiting list for the next program implementation. There are benefits and drawbacks for the internal validity of evaluation findings based on decisions about having a pretest and use of a comparison group. Discussion of pros and cons of proposed evaluation designs focus on EOS program effects on related management knowledge delivered by EOS[7]. Table 1 displays evaluation designs that will be addressed. These designs assume that a post-test will be administered at the end of the EOS program and that if a pre-test is used, all participants will complete it before the program start.

| Table 1. Possible Evaluation Designs to Assess EOS Effects on Participants Knowledge | | | |
|---|---|---|---|
| | | **Use Comparison Group** | |
| | | **Yes** | **No** |
| **Use of Pretest** | **Yes** | Design A | Design B |
| | **No** | Design C | Design D |

---

[7] Discussions will not be inclusive of all potential designs or pros and cons of a given design, but will describe those considered "feasible" and "appropriate" to assess EOS program effects.

## Design A

**Pretest**: Yes     **Comparison Group**: Yes

**Pros**

- Any differences at pre-test between the EOS and comparison groups (e.g., one group is already more knowledgeable about NIAID management than the other) can be minimized (controlled for) during analysis.

- Any knowledge change from pre- to post-test scores among EOS participants can be <u>attributed</u> to the EOS program. Change scores among EOS participants will be compared with change scores in the comparison group. It is expected that there will be larger differences in knowledge scores (increased) among EOS participants than in the comparison group.

- Any effects due to test taking (e.g., better post-test scores due to participants' familiarity with pretest) are controlled for.

**Cons**

- There may be possible bias due to unique characteristics of comparison group (comparison participants may be different from EOS participants before the program starts, thereby influencing outcomes).


## Design B

**Pretest**: Yes     **Comparison Group**: No

**Pros**

Results will show any knowledge change from pre- to post-test among all EOS participants.

**Cons**

Will NOT know if any change in knowledge is related to EOS or another plausible explanation (e.g., an ongoing management seminar at NIH that EOS participants also attended) because there is no comparison group to assess if people who did not attend the EOS program have a knowledge change similar to EOS participants. It is possible that non-EOS participants may have also attended a management seminar at NIH improving their knowledge.

| **Design C** |
| --- |
| **Pretest**: No     **Comparison Group**: Yes |

**Pros**

Minimum burden on participants.

Results will show if one group is more knowledgeable about management information provided by EOS at post-test than the other group.

**Cons**

Will NOT know if there was any change in knowledge before the program compared to after the program (it is plausible that there was minimal to no change among EOS participants).

Any differences in post-test scores between EOS participants and comparison group (e.g., higher scores among EOS participants) <u>cannot</u> be readily attributable to EOS (e.g., Something else other than EOS may explain the better scores among EOS participants).

| **Design D** |
| --- |
| **Pretest**: No     **Comparison Group**: No |

**Pros**

Minimum burden on participants.

**Cons**

Will only know post-test knowledge scores among EOS participants. There will be no baseline and/or comparison data against which to understand post-test scores (e.g., cannot infer that EOS improved management knowledge or that any knowledge acquisition took place).

*Recommendations:*

➢ **Minimize "cons" to evaluation design.** Decisions regarding the evaluation design to implement should minimize threats to validity of evaluation findings (cons).

➢ **Use a comparison group to assess knowledge change.** EOS is a new program that, if successful, may be modeled across NIH Institutes and Divisions. It is important to assess its effectiveness to increase management knowledge to effectively support conduct of good science at NIAID. An evaluation design that includes a comparison group with pre- and post-tests can best attribute differences in supervisory knowledge appropriate for NIAID to EOS.

➢ **If a comparison group is not possible, pretest and post-tests need to be administered.** Pre- and post-test scores will allow analysis of change from before EOS is delivered to after the program has been implemented. Any change in scores is likely to be related to the EOS program.

➢ **Use appropriate sample size to demonstrate program effects (effect size).** Sample size can either be predetermined using a power analysis calculation with an estimated expected percentage change in knowledge or a percentage of participants expected to

demonstrate knowledge at post-test. Using power analysis, expected large changes in scores from pre- to post-tests often require a smaller sample size than if a small percentage change is expected. Expected percentage changes are determined by the expertise of program staff and target audience characteristics (e.g., prior knowledge of management skills may lead to a small increase in knowledge from pre- to post-test). For example, assuming a power of .80 and alpha=.05, the minimum number of participants needed to demonstrate a 10% change in scores from pre- to post-test (effect size) is 126 and for a 20% change, it is 61 participants.

***Individual Data versus Aggregate Data.*** Another consideration for EOS evaluation is how data will be collected for analysis. Data can be collected at an individual or aggregate level. At an individual level, a participant's data are linked to a nonidentifying unique ID to protect the person's anonymity and confidentiality of his or her answers. There is no need for a non-identifying ID linked to a participant's responses if data are collected and reported only in an aggregated state.

*Recommendation:*

➢ **Collect data at an individual level.** Matching a person's pretest score to that person's post-test score allows for a more precise analysis of change in knowledge. Analysis of individual data is based on those who took both the pre- and post-test. When data are collected in an aggregated manner, analysis includes all available pre- and post-test scores indiscriminately. Other useful information cannot be derived from analysis (e.g., Do number of sessions attended influence knowledge acquisition? Do knowledge scores vary based on participants' characteristics such as division, years of NIAID experience, previous experience with management trainings?).

**Goal 3:    Application of EOS program content (e.g., learned skills) in the workplace setting**
(Intermediate goal, *Transfer of EOS related knowledge*)

Accomplishment of this goal can be evaluated by examining if:

- EOS participants increasingly use learned management knowledge (e.g., skills, tools) to support scientific research and research administration over time

- Supervisors of EOS participants perceive a change in management style among their managers/supervisors over time.

*Performance Measures:* Data from the form on Application of Knowledge Learned completed by EOS participants, group interviews with EOS participants, and interviews with supervisors of EOS participants will provide information on behavioral changes that reflect management skills learned through EOS and applied in the workplace. These data will be based on self-report and perception of others (their supervisors).

*Comparison Measures:* These data can be collected more than once in a given period of time to examine application of learned knowledge over time.

*Recommendations:*

➢ **Include NIAID appropriate case scenarios in EOS knowledge test.**  The use of case scenarios in the knowledge test in which participants are asked about their (EOS) problem-solving strategies will gather data on how they will respond/act in given situations (e.g., what and how management strategies discussed in the EOS program are used to inform their decisions and courses of actions regarding a situation). Data

on case scenarios can be considered as proxy for transfer of EOS knowledge as it can provide some indication of how participants apply learned knowledge.

**Goal 5:** **Supportive environment for NIAID funded scientific research**
(Long-term goal, *EOS program effects/impact*)

Accomplishment of this goal can be evaluated by examining if there is:

- Improved relationships (better interactions, communications) between managers and staff conducting NIAID-funded scientific research

- A perceived supportive environment (e.g., efficient, helpful, appreciative) for scientific research among those conducting NIAID-funded scientific research.

*Performance Measures:* Data from group interviews with staff interacting with EOS participants and from interviews with supervisors of EOS participants and NIAID-funded researchers conducted some time after managers completed EOS.

*Comparison Measures:* These data can be collected more than once in a given period of time to examine application of learned knowledge over time.

# Summary

NOVA conducted this evaluation feasibility study to determine whether conducting an evaluation of NIAID OWER LOD EOS management development program is appropriate and to identify optimal evaluation approaches. In conjunction with LOD EOS program staff and SPEB staff, the NOVA evaluation team engaged in a methodical assessment of evaluation options, methodologies, and instruments to provide guidelines and specific recommendations to design a process and outcome evaluation of the EOS program. After conducting the Feasibility Study, NOVA concludes that a systematic, full-scale evaluation of the EOS program is feasible and needs to be conducted to determine its effectiveness to meet its stated goals (see NIAID EOS goals in Exhibit 1).

**Key Information to Be Learned from a Systematic,**
**Full-Scale Evaluation of the EOS program**

- Level of satisfaction with the EOS program including:
  - ✓ Content (e.g., set learning objectives, participant learning expectations)
  - ✓ Structure (e.g., cohort approach, opportunities for networking & collaborative problem solving)
  - ✓ Resources and materials available for each topic area
  - ✓ Other program aspects (e.g., Skillscope 360 assessment, individual coaching, location).

- Perceived relevance to NIAID supervisory role including:
  - ✓ Understanding of how good management at NIAID supports science
  - ✓ Use of tools and strategies that are applicable to different management positions

- Effectiveness of EOS in increasing knowledge of high quality management (e.g., practices, tools, strategies) critical for NIAID supervisors and role of supervisors within NIAID structure

- Supervisory performance over time including:
  - ✓ Efficiency as managers/supervisors
  - ✓ Improved relationships with staff

- Improvement in NIAID managers support to researchers conducting NIAID-funded scientific research.

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Patton, M. Q. (1997). *Utilization-focused evaluation: the New Century Text* (3rd ed.). City, CA: Sage Publications.

# APPENDIX A: Suggestions from AOL Alumni for the Essentials of Supervision Program

The following list of topics and format options were sent to 80 Art of Leadership Alumni of which 22 responded. For Part 1, they were asked to place an X by those topics and sub-topics that should be included in an *Essentials of Supervision* program, and to add any not listed. For Part 2 of the questionnaire, they were asked to place an X by their preferred format, and whether the program should be mandatory for new supervisors. Below is a list of the topics selected by AOL respondents in order of perceived importance, along with the compiled response regarding program format.

| Topic | # of responses | % |
|---|---|---|
| **Setting the Direction for Your Unit** | **19** | **86%** |
| • Understanding the bigger picture | 17 | 77% |
| • Setting unit priorities and goals | 17 | 77% |
| • Planning, organizing, and assigning the unit's work | 16 | 73% |
| **Defining the Supervisor's Roles and Responsibilities** | **18** | **82%** |
| **Recognition and Rewards** | **17** | **77%** |
| • Awards process overview | 16 | 73% |
| • Monetary/non-monetary rewards | 15 | 68% |
| **Hiring** | **17** | **77%** |
| • **Interviewing/reference check techniques** | 17 | **77%** |
| • Recruitment/selection process | 15 | 68% |
| • Writing job descriptions | 11 | 50% |
| **Performance Management** | **16** | **73%** |
| • **Providing performance feedback** | 19 | 86% |
| • **Individual development plans (IDPs)** | 18 | 82% |
| • Developing employee performance plans | 17 | 77% |
| **Leave Management** | **12** | **54%** |
| • **Overview of various leave programs** | 14 | 63% |
| • Managing the pay systems (ITAS) | 12 | 54% |
| **Employee Relations** | **13** | **59%** |
| • **Recognizing the distinction between performance and conduct** | 12 | 54% |
| • Working with the progressive discipline process | 13 | 59% |
| **Ethics** | **12** | **54%** |
| • Overview of regulations and policies | 11 | 50% |
| • Conflict of interest | 8 | 36% |
| • Outside work activities | 7 | 32% |
| • Financial disclosure requirements | 7 | 32% |
| **Equal Employment Opportunity** | **12** | **54%** |

| Topic | # of responses | % |
|---|---|---|
| • Affirmative employment practices | 9 | 41% |
| • Supporting diversity | 9 | 41% |
| • Other<br>(B*etter understanding of how EEO impacts the hiring process might be helpful*) | 1 | |
| **Managing Fiscal Resources** | **12** | **54%** |
| • Preparing budget estimates | 12 | 54% |
| • Monitoring expenditures | 11 | 50% |
| • Reprogramming/reallocating funds | 10 | 45% |
| **Procuring Services and Supplies** | **10** | **45%** |
| • Delegations of authority | 8 | 36% |
| • Credit card purchase | 4 | 18% |
| • Small purchases | 3 | 14% |
| • Contracts/research contracts | 4 | 14% |
| **Travel** | **9** | **41%** |
| • Process for requesting/approving travel | 9 | 41% |
| • Requirements for local/domestic/foreign travel | 9 | 41% |
| • Considerations re: sponsored travel | 5 | 23% |
| • Finalizing travel documents | 2 | 9% |
| **Overview of Administrative Systems** | **8** | **36%** |
| • VEDS, VSOF, Data Warehouse, etc. | 7 | 32% |
| • Getting system support | 7 | 32% |
| **Format** | **# of responses** | **%** |
| **2-3 consecutive days-follow on monthly topics** | **14** | **63%** |
| **6-8 month cohort program** | **8** | **36%** |
| **Program should be mandatory for new supervisors.** | **18** | **82%** |
| **Program should not be mandatory for new supervisors.** | **3** | **14%** |

# APPENDIX B: Results from Prototype Data Analysis

Data collected on the EOS prototype analyzed included participants' (a) responses to a survey on their perceptions of the overall program (e.g., satisfaction, relevance to their supervisory/ management role, whether the program met participant expectations) and about program's structure, content, format, and schedule; (b) evaluations at the end of each session; and (c) reports describing situations when they had applied EOS-related learned knowledge.

A total of 21 participants out of 24 enrolled in the program completed the survey. About 5 to 20 participants completed assessments at the end of individual sessions. Five participants completed the form describing how they had applied EOS sessions knowledge.

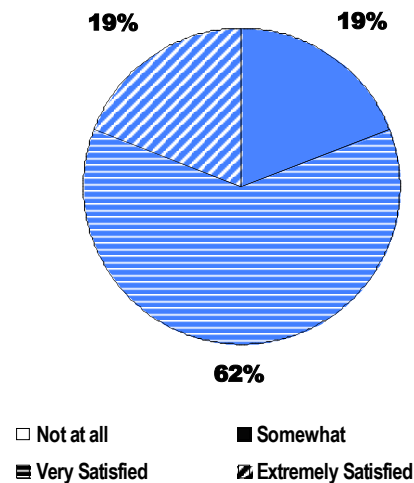**Results from Surveys and Individual Evaluations**

## Satisfaction with EOS
### (N=21)

Participants' comments:

*This course has been great and continues to exceed expectations*

[EOS] *Should be made mandatory for all new supervisors and managers from now on*

[EOS learning objectives were] *Very well met!*



19%    19%

62%

☐ Not at all          ■ Somewhat
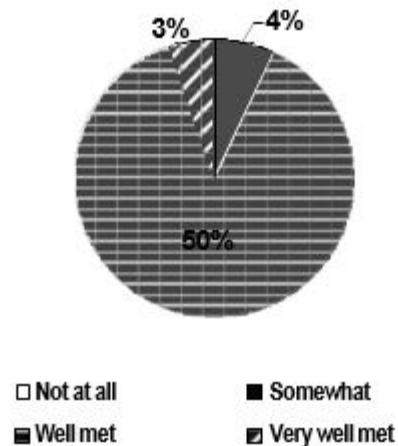☰ Very Satisfied      ▨ Extremely Satisfied

## Perceived Relevance of EOS to Supervisory/Mgmt Role (N=21)

Participants' comments:

- [EOS] *Topic choices excelled for new managers*
- *This topic* [Hiring] *is very relevant to supervision and class agreed that hiring the best person is crucial to the success of the organization*
- [EOS] *Learning objectives were relevant* [to supervisory role]

15%

85%

☐ Very Irrelevant  ■ Somewhat Irrelevant
■ Somewhat Relevant  ▨ Very Relevant
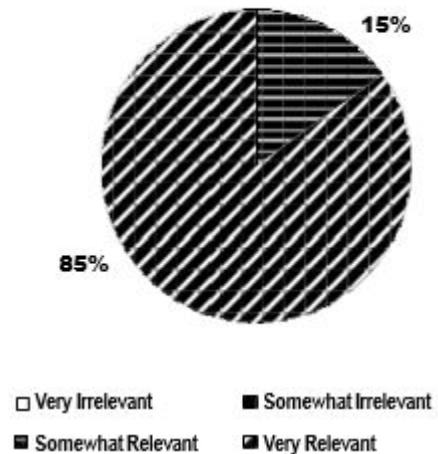
# Learning Expectations met by EOS
## (N=20)

3%  −4%

50%

☐ Not at all  ■ Somewhat
▤ Well met  ▨ Very well met

# Perceived Impact of EOS
# Sessions on Knowledge  (N=21)

| Session Topics | NOT AT ALL | NOT MUCH | SOME | A LOT |
|---|---|---|---|---|
| Role of the manager | | 5% | 33% | 62% |
| Setting Direction for your unit | | | 52% | 48% |
| Hiring | | | 35% | 65% |
| Employee Relations/Ethics | | | 24% | 76% |
| Performance Management | | 5% | 37% | 58% |
| Coaching your Employees | | 10% | 32% | 58% |
| Building a Business Case | | 14% | 19% | 67% |

# Session 1: Orientation

**Learning Objectives**

- Provide a variety of NIAID management perspectives

- Provide an understanding about the value of the management role at NIAID

- Provide feedback about how you are perceived as a manager and a framework for developing your management skills

- Have an opportunity to work on your development plan

- Provide information about the EOS program



**Satisfaction with Session**
(n=14)
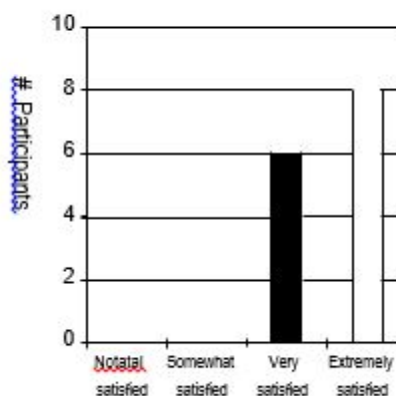
# Session 2: Setting Direction for your Unit

**Learning Objectives**

- Involving your staff in setting Direction by creating alignment, Building support, and managing The work.

- Diagnosing the direction you Have set and deciding if you Want to make any changes

- Diagnosing how to set the Direction and deciding if you Want to make changes.

## Satisfaction with Session
(n=14)
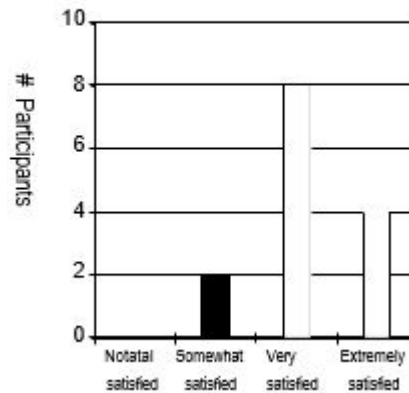


# Session 3: Hiring the Best Person

**Learning Objectives**

- Familiarity with the hiring process At NIAID and who can help

- Ability to set a standard for hiring By identifying key characteristics

- Ability to develop job related, Behaviorally based, legally Defendable interview questions

- Ability to select the best interview Structure for your position

- Knowing how to document and Track the hiring process

## Satisfaction with Session
(n=14)
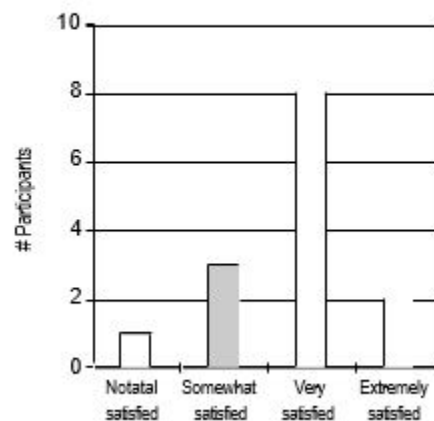
# Session 4: Employee Relations & Ethics

**Learning Objectives**

- Understanding the role of the Employee Relations Specialist

- Understanding the various Leave options and categories

- Ability to identify conduct vs. Performance issues

- Understanding the process for Managing conduct issues

  *There were 14 participants in the session, But only 13 completed this question

**Satisfaction with Session**
(n=14)*
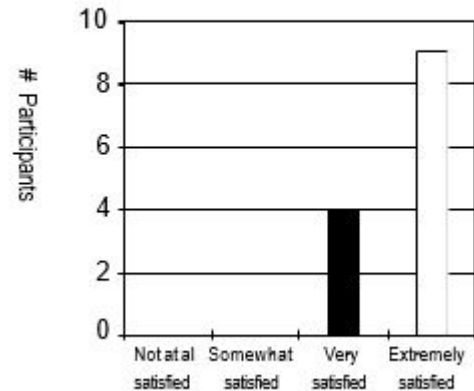
# Session 5: Performance Management

**Learning Objectives**

- Have an understanding of NIAID's Performance Management Appraisal Program (PMAP)

- Understand how to set and Communicate clear expectations For your employees

- Understand how to set measures And track performance during the year

- Be Prepared to meet with your Employee to discuss performance Expectations.

**Satisfaction with Session**
(n=9)
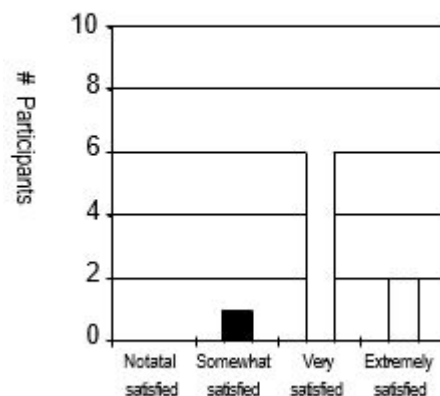
# Session 6: Coaching Your Employees

**Learning Objectives**

- Understand how to coach your employees to improve performance

- Be able to provide specific feedback that is likely to be acted on

- Understand the processes for addressing performance problems

- Understand how to recognize and reward good performance

  *There were 8 participants in the session, But only 5 completed this question

**Satisfaction with Session**
(n=8)*
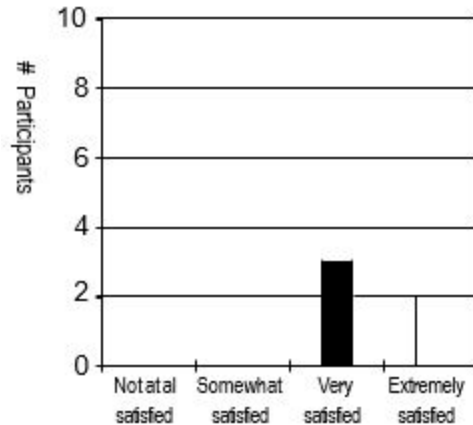


# Session 7: Building a Business Case
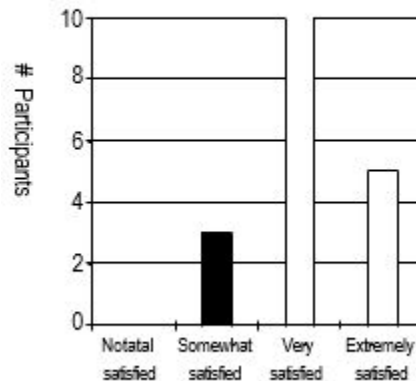
**Learning Objectives**

- Make a compelling business case that your project should be funded

- Anticipate and respond to possible objections.

- Identify and collaborate with potential partners.

- Make it easy for others to move your ideas forward for senior review

- Create a presentation convincing to those who make funding decisions.

**Satisfaction with Session**
(n=20)

# Some comments provided by EOS participants:

**Session: Coaching Your Employees**

*This was one of the most useful sessions. Communication is one of the most difficult areas to always be aware of. I appreciate the help.*

**Session: Strategies for Success**

*I most enjoyed the division of setting direction for your unit into 3 distinct parts – creating alignment, assessing and delegating work, and building support – and the constructive ways offered to achieve each.*

**Session: Hiring the Best Person**

*This topic is very relevant to supervision and the class agreed that hiring the best person is crucial to the success of the organization. I really feel that it would be worth devoting a full session to this topic. This course has been great and continues to exceed expectations*

# Some recommendations provided by EOS participants:

**Session: Orientation**

*It would have been helpful to have Dr. McGowan on the panel since he was the only "non-scientist" position represented*

**Session: Performance Management**

*Would be helpful to discuss the positive aspects and imperfections in the current HHS performance system and how to work within this framework and maximize it's applicant to help improve employee performance and overall job satisfaction.*

**Session: Building a Business Case**

*Have group move through a hypothetical business plan.*

**Participants Reported Applications of EOS-related Knowledge Learned**

**FORM: Evaluating Application of EOS Topics to the Work You Do**

The goal of this form is twofold:

1. To provide you with an opportunity to reflect on the strategies and approaches you have learned and how you have been able to apply them in your work, and
2. To provide information for the EOS Design Team about which topics and strategies have been most useful to you in your supervisory roles.

We will use this information to help us determine what, if any, changes we need to make to the program.

| EOS Sessions/Topics    What was presented: |
| --- |
| **Session 1 - Program Orientation** |
| • Hearing a variety of perspectives about the role of the manager at NIAID from NIAID senior managers (i.e., Dr. John McGowan, Dr. Charles Hackett, Dr. Carole Heilman, Dr. Dean Metcalfe, and/or Dr. Hugh Auchincloss)<br>• How I am perceived as a manager by others (from the Skillscope™ results)<br>• Creating my Individual Development Plan (from the Skillscope™ results) |
| **Examples of how I implemented/applied what was presented during this session to my work:** |
| **Participant 1**:  Used the info in discussions with others about how this is seen as important and is also good at their science.  Successful people see the need for both.  I used this information to have a conversation with my manager.  Worked on areas that could use development by setting goals related in my performance plan. |
| **Participant 2**:  Improved communication skills |
| **Participant 3**: Diversify my management and supervisory style.  Have become sensitive to the management and supervisory style of others |
| **Participant 4**: Perspectives - I found this part extremely valuable, especially the presentation from Drs. McGowan, Metcalfe and Auchincloss.  Some of their comments have shaped my recent behaviors in dealing with my staff.  Skillscope – was informative, but I participated in the NIH-wide leadership training class last year and though the 360 analysis used in that course was more comprehensive, so not much new was learned from this evaluation.  However, the two sessions with the executive coach were great.  We discussed some of my current management challenges and tactics for addressing them, which I implemented on several occasions. |
| **Participant 5**: Understanding of NIAID management issues.  Discussion with supervisor on 360 and assessment of areas for development for myself as a manager.  Feedback from supervisor staff |

| EOS Sessions/Topics    What was presented: |
|---|

### Session 2 – Setting Direction for Your Unit

- How to align the work of my unit with organizational goals
- How to get the support of my boss and my peers
- How to figure out what core work we should focus on
- How to delegate work

| Examples of how I implemented/applied what was presented during this session to my work: |
|---|

**Participant 1:**  Strive to keep abreast of what goes on outside our office.  Worked to make my supervisor successful.  Learned to ask!  Is not always obvious.  Let go of many tasks that could be done effectively by others.  Accepted mistakes when not critical to outcome.

**Participant 2**:  Implementing major changes in rules and responsibilities of the branch staff as the Division structure is changing

**Participant 3**:  Use organizational goal to gain support of my peers

**Participant 4**:  Missed this session

**Participant 5**:  Used some of the examples of exercises

| EOS Sessions/Topics    What was presented: |
|---|

### Session 3 – Hiring the Best Person

- How to develop an accurate description of the work required of the position
- What I can and can't ask in interviews
- How to develop behavioral based questions
- How to choose an appropriate way to interview candidates (e.g., one-on-one, panel, etc.)

| Examples of how I implemented/applied what was presented during this session to my work: |
|---|

**Participant 1**:  Used the questions in hiring

**Participant 2**:  Structured interviews across branches for filling up similar positions

**Participant 3**: Effective use of interview in selecting people to work with

**Participant 4**:  I missed this session, but attended the NIAID-wide training offered to NIAID staff (taught by Jane Tamayna) same individuals teaching the EOS).  I found this class to be extremely valuable.  I often conduct interviews and never felt like I asked the right questions.  This class provided clear and easy to apply guidance on developing appropriate interview questions in order to better evaluate the candidates.  I've applied these guidelines to recent interviews and learned a lot more about the candidate's qualifications.  Terrific class!

**Participant 5**: None provided.

| EOS Sessions/Topics    What was presented: |
|---|

**Session 4 – Employee Relations/Ethics**

- Learning about the roles of the Employee Relations Specialist and Ethics Director, and what sort of help they can provide
- Understanding various leave options and categories, and how to address each
- How to identify conduct vs. performance issues and understanding the processes for managing conduct
- Understanding Ethics requirements and how to implement them in the workplace

| Examples of how I implemented/applied what was presented during this session to my work: |
|---|

**Participant 1**:  Once I met Sharon I contacted her to answer questions.  Empowered me to take action on issues knowing someone would help!  I had heard E.R. was no help and found the opposite to be true.

**Participant 2**: None provided.

**Participant 3**:  Appreciation for the role and function of the ER and EO offices.  A better understanding of Ethics requirement and compliance and forms completion made easy.

**Participant 4**:  The Employee Relations session was extremely valuable.  Sharon Steinberg clearly knew her material and presented it in an easily understandable manner.  I found the case scenarios also very helpful.  The Ethics Session was also somewhat useful, but the delivery was a bit too familiar (bad and inappropriate jokes at times) and detracted from the importance of the message being delivered.

**Participant 5**:  Performance talk helped with performance issues with an employee that was presenting problems – follow up with HR based on suggestions at presentation.

| EOS Sessions/Topics    What was presented: |
|---|

**Session 5 - Performance Management**

- Understanding NIAID's Performance Management system
- Learning how to set and communicate expectations with my staff
- Learning how to set measures and track staff performance
- Learning how to hold a conversation with my employee about expectations

| Examples of how I implemented/applied what was presented during this session to my work: |
|---|

**Participant 1**:  Used smart goals in development o performance plans.  Realized that there is a new expectation for this and it can make a difference.

**Participant 2**:  Communicating expectations for "excellent" evaluation of the employee performance

**Participant 3**:  Set a clear and realistic expectation.  Communicating expectations in a more user-friendly tone.

**Participant 4**: This is an area of concern with most NIH employees, due to the new performance system-so the class was useful in terms of providing guidance on how to hold conversations with employees about setting expectations and evaluating their performance.  However, managers are facing some real morale issues that were not addressed fully.  It would have been useful to include an honest discussion about the real limitation of the current performance contract system (which I think is designed to help manager under-performing employees), especially for those employees who are performing well.  How do we keep up morale and work output in these cases?

**Participant 5**:  Helpful in setting goals for self and team.

| EOS Sessions/Topics    What was presented: |
| --- |

### Session 6 – Coaching Your Employee

- Understand how to coach your employees to improve performance
- Be able to provide specific feedback that is likely to be acted on
- Understand the processes for addressing performance problems
- Understand how to recognize and reward good performance

| Examples of how I implemented/applied what was presented during this session to my work: |
| --- |

**Participant 1**:  Realized how important is a set aside time to talk to employees

**Participant 2**:  Improved skills in providing feedback to employees

**Participant 3**:  Pay closer attention to overt and not-so-overt feedback.  Use concrete examples as a part of the coaching process.

**Participant 4**:  Also very useful-in terms of how to give positive and negative feedback.  I have used the techniques described to give both positive and negative feedback to my staff, and think it has helped (given my some guidance on how and when to hold the conversations).

**Participant 5**: None provided.

| EOS Sessions/Topics    What was presented: |
| --- |

### Session 7 – Building a Business Case

- Understand the impact of competing demands for resources
- Present your goals in the context of organizational needs and benefits
- Write a business case that increases the chances of funding and support

| Examples of how I implemented/applied what was presented during this session to my work: |
| --- |

**Participant 1:**  None provided.

**Participant 2:** None provided.

**Participant 3:** None provided.

**Participant 4:**  Jane's presentation content was right on target in terms of the issues NIAID staff need to consider when developing/planning initiatives.  I will share her "Business Case Model" with my supervisor and staff.  Lessons learned/perspectives from staff also useful although 2 may have been enough.  Thank you

**Participant 5:**  Helpful in formulating issues and presenting ideas to management regarding a new project that will be implemented.

# APPENDIX C: Literature Review Results for NIAID EOS

A literature review of relevant studies on evaluation of management professional development programs and, specifically, on evaluation of trainings for managers supporting scientific research was conducted. This is a description of how the review was conducted (e.g., search terms, search engines) and summary of key findings.

| Search Terms | Search Engines/Searched Sites |
|---|---|
| • Justifying professional development programs <br> • Evaluating Professional Development Programs <br> • Evaluating management training <br> • Leadership program evaluation <br> • "Evaluation" and "management training" <br> • Management training <br> • Management development programs <br> • Evaluation of professional training <br> • Evaluation of supervisors and managers <br> • Training and development in organizations | • PubMed <br> • Google Scholar <br> • Harvard Business On-line <br> • Free Management Library <br> • ROI Institute <br> • American Society of Training and Development <br> • Association for Training and Development |

# KEY FINDINGS

### Reasons for Measuring Training and Development Activities[1]

☞ To make sure the curriculum is taking the organization in the right direction.

☞ To determine whether the actions being taken or behavior changes resulting from the training align with the business case or the reasons for the change.

☞ To justify the costs of the training and development curriculum that were chosen to enhance change initiatives

☞ To provide base-line measurements that can identify favorable or unfavorable trends with respect to the training curriculum and the organization's goals and objectives.

☞ Measurement information can help management identify gaps and give them the tools to decide whether to stay the course or change direction.

### Other Key Findings

➢ The past decade has witnessed an unparalleled growth in the number of employee/management development programs initiated in organizational settings.

- According to the "New Supervisor Training Program Practitioner Consensus Survey" conducted in 2007, nearly half (47%) of 338 companies polled do not have a new supervisor training program in place. Most of these organizations (77%) consider it important enough to make it mandatory, investing considerable resources into it[2].

  Importantly, even where there are new supervisor training programs in place, most companies do not measure their effectiveness; 57% do NOT measure their effectiveness. According to a spokesperson from the company sponsoring the survey:

  > "A lot of companies just go on faith…. it's amazing that more companies don't even try. Can you imagine if we applied the same principle to quality control in our manufacturing processes? We'd make some of the worst products on earth."

- Emerging research shows that investments in human capital, including training, are positively related to organizational performance. Employee and management development activities can play a critical role in a company's HR and business strategies[3].

- An organization's training and development activities can enhance the human resource plan and support the strategic direction of the organization. The prevalence, expense, and strategic importance of management development activities indicate that these activities should be monitored on an ongoing basis. Nonetheless, decisions about training are often made without the benefit of systematic evaluation efforts[4].

- A study showed that participants are more likely to transfer training to their work when they had attended the course on their own initiative, more of them believed the course would be beneficial to them on the job prior to attending it, and a greater proportion had had pre-course discussions with their boss[5]. Organizational factors found to inhibit training transfer included 'overload of work', 'crisis work' and 'failure to convince older workers'. The trainee's boss management style and attitudes were the single most important factor in management training transfer. Transfer attempts were more likely to be successful and beneficial where the boss 'sponsored' the new idea (listen to new ideas and allow experimentation with them).

# Levels of Measurement for Evaluating Training & Development Initiatives

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| Level of Measurement | Definition | Examples of Measurement | Comments |
|---|---|---|---|
| **Level 1**<br>Reactions and Planned Action | How did participants respond to the training? | • Post-session participant questionnaire.<br>• Verbal feedback.<br>• Observation of trainees. | • Low cost.<br>• Immediate feedback.<br>• The rumor mill can also provide feedback. |
| **Level 2**<br>Learning | To what extent did the participants change awareness, skills, or motivation? | • Pre-test/Post-test change scores on measures of skill or knowledge. Might involve a control group.<br>• Retrospective assessment of skills before training versus skills after training.<br>• Performance tests or simulations to gauge learning. | • Effectiveness of learning is the catalyst for behavior change.<br>• Long-term follow-up can measure the retention of the learning. |
| **Level 3**<br>Behavior (on-the-job application) | Can behavior change be observed on the job as a result of the training? | • Pre-test/Post-test measures of behavior (assessments, 360 ₀ feedback, surveys, interviews, etc.). Might involve a control group.<br>• Retrospective assessment of skills before training versus skills after training (e.g., how was I before versus after). | • Requires a waiting period to allow participants time to try out their skills.<br>• Might want to conduct multiple follow-ups at identified intervals.<br>• Can be a small-scale versus large-scale effort. |
| **Level 4**<br>Results | What is the level of change in organizational performance indicators that occurred because the participant attended the class? | • Changes against baselines.<br>• Evaluation of cost versus benefits.<br>• Training curriculum yields "x" % of change, growth in dollars, etc. | • Difficult to isolate a clear link between training and results. Many other factors come into play.<br>• Works best when you are already tracking performance indicators over time.<br>• Often requires "inferring" or estimating effects. |
| **Level 5**<br>Return on Investment | What is the ROI of the training curriculum? Did the return exceed the investment? | • Cost of training and development versus ROI. | • Difficult to show cause- and-effect-relationships.<br>• Usually involves many estimates.<br>• Can be difficult to convey results. |

*NOVA Research Company*

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# APPENDIX D: Essentials of Supervision:
## Strategies for Success Overall Program Evaluation

| 1. How well did the EOS program meet your learning expectations? | NOT AT ALL WELL | NOT VERY WELL | SOMEWHAT WELL | VERY WELL |
|---|---|---|---|---|
| | | | | |

| 2. How relevant was the EOS program to your supervisory/ management role? | VERY IRRELEVANT | SOMEWHAT IRRELEVANT | SOMEWHAT RELEVANT | VERY RELEVANT |
|---|---|---|---|---|
| | | | | |

| 3. How well did the overall program meet its stated objectives? The program sought to provide: | NOT AT ALL WELL | NOT VERY WELL | SOMEWHAT WELL | VERY WELL |
|---|---|---|---|---|
| 3.1 An understanding of the qualities and requirements of good management at NIAID | | | | |
| 3.2 An understanding about the role of the supervisor within the NIAID structure and the tools and strategies to succeed | | | | |
| 3.3 A vehicle for managers with 0-5 years of supervisory experience at NIAID to enhance supervisory skills | | | | |
| 3.4 Structured opportunities for networking and collaborative problem solving among participants from various divisions | | | | |
| 3.5 References and resources for each topic area | | | | |

3.6 Please tell us your comments relative to the question about learning objectives **(feel free to use the back of this page if you need additional space):**

| 4. The program was structured to have a 1-day orientation meeting followed by 3-hour sessions, once a month for 6 months. What would you have preferred? | LEAVE AS IS: ONCE A MONTH FOR 6 MONTHS | TWICE A MONTH FOR 3 MONTHS | A COMBINATION OF ONCE OR TWICE A MONTH MEETINGS FOR 4 MONTHS |
|---|---|---|---|
| | | | |

4.1 **Please tell us your comments about how the program was structured. Feel free to suggest other program structures, for example, complete entire course in 1 week** (use the back of this page if you need additional space)**:**

| 5. How satisfied were you with the following aspects of the program? | VERY DISSATISFIED | SOMEWHAT DISSATISFIED | SOMEWHAT SATISFIED | VERY SATISFIED |
|---|---|---|---|---|
| 5.1. Skillscope 360 Assessment | | | | |
| 5.2. Individual coaching session(s) | | | | |
| 5.3. Cohort structure (ie: attending sessions with same participants) | | | | |
| 5.4. NIAID specific content | | | | |
| 5.5. Session Presentations (ie: program delivery, session materials) | | | | |
| 5.6. Session locations: (6610, Fernwood, 6700) | | | | |

5.7 **Please tell us your comments on different aspects of the program** (use the back of this page if you need more space)**:**

| 6. How much have you used the resource and reference materials provided? | NOT AT ALL | NOT MUCH | SOME | A LOT |
|---|---|---|---|---|
| | | | | |
| 7. How helpful did you find the resource and reference materials? | NOT HELPFUL AT ALL | NOT VERY HELPFUL | SOMEWHAT HELPFUL | VERY HELPFUL |
| | | | | |

7.1 **Tell us your comments on the resource and reference materials** (use the back of this page if you need more space)**:**

| 8. With the exception of the 1-day Orientation, what <u>time frame</u> would have enhanced your learning of each session content (e.g. maintain your attention and cover all the material)? | LESS THAN 3 HOURS | 2 HOURS, IN 2 SEPARATE SESSIONS | 3 HOURS ONCE | 4 HOURS ONCE |
|---|---|---|---|---|
| 8.1. **Session 2:** Setting Direction for your Unit | | | | |
| 8.2. **Session 3:** Hiring | | | | |
| 8.3. **Session 4:** Employee Relations/Ethics | | | | |
| 8.4. **Session 5:** Performance Management (PMAP/Setting Objectives) | | | | |
| 8.5. **Session 6:** Coaching Your Employees | | | | |
| 8.6. **Session 7:** Building a Business Case | | | | |

8.7. **Tell us your comments about the duration of program sessions** (use the back of this page if you need more space)**:**

| 9. How much do you think each EOS session would increase related knowledge <u>among participants with 0-5 years of NIAID supervisory experience</u>? | NOT AT ALL | NOT MUCH | SOME | A LOT |
|---|---|---|---|---|
| 9.1. **Session 1:** Orientation-Role of the manager/ personal management strengths and development needs | | | | |
| 9.2. **Session 2:** Setting Direction for your Unit | | | | |
| 9.3. **Session 3:** Hiring | | | | |
| 9.4. **Session 4:** Employee Relations/Ethics | | | | |
| 9.5. **Session 5:** Performance Management (PMAP/Setting Objectives) | | | | |
| 9.6. **Session 6:** Coaching Your Employees | | | | |
| 9.7. **Session 7:** Building a Business Case | | | | |

9.8. **Please tell us your comments about the EOS sessions for supervisors with 0-5 years of NIAID supervisory experience** (use the back of this page if you need additional space)**:**

| 10. What is your overall satisfaction with the EOS program? | VERY DISSATISFIED | SOMEWHAT DISSATISFIED | SOMEWHAT SATISFIED | VERY SATISFIED |
|---|---|---|---|---|
| | | | | |

**11. What suggestions do you have for follow-on to reinforce or enhance your learning? (For example: SOS brown bag sessions) List suggestions for useful topics to address.**

**12. What suggestions do you have to continue networking opportunities?**

**13. What suggestions do you have to improve the program?**

**If you have additional comments later on, please e-mail those to** _____
**Thank you from the NIAID LOD Team!**
Fax: 301-480-1599   Phone: 301-451-4328