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TECHNICAL REPORT

Improving the Impact and Effectiveness of the National Vaccine Advisory Committee

Jeanne S. Ringel, Marisa Adelson, Katherine M. Harris,
Dmitry Khodyakov, Nicole Lurie

Prepared for the Department of Health and Human Services

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Preface

This report identifies the reasons that the National Vaccine Advisory Committee (NVAC) has not had a greater impact on vaccine and immunization policy and practice and offers a set of strategies to improve the effectiveness of the committee. The results of the evaluation will inform the U.S. Department of Health and Human Services, the National Vaccine Program Office, NVAC, and other stakeholders in the vaccine and immunization enterprise regarding changes in organizational structures and processes that will increase the impact and effectiveness of NVAC in the future.

This work was prepared for the U.S. Department of Health and Human Services National Vaccine Program Office. This research was conducted within the RAND Health Center for Public Health Preparedness. RAND Health is a division of the RAND Corporation. A profile of the center, abstracts of its publications, and ordering information can be found at <http://health.rand.org/preparedness>. More information about RAND is available at our Web site at <http://www.rand.org>.

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Summary

The National Vaccine Program (NVP), the National Vaccine Program Office (NVPO), and the National Vaccine Advisory Committee (NVAC) were established by the National Childhood Vaccine Injury Act of 1986 (P.L. 99-660). The law required the Secretary of the Department of Health and Human Services (HHS) to establish an NVP to achieve optimal prevention of human infectious diseases through immunization and to achieve optimal prevention against adverse reactions to vaccines. The Assistant Secretary for Health (ASH) has been designated by the secretary to serve as the director of the NVP and is supported in this role by NVPO and NVAC. NVPO, housed within the Office of Public Health and Science, manages the NVP. The primary functions of NVPO are to develop and implement strategies for achieving the goals of the NVP as delineated in the National Vaccine Plan, in large part by coordinating and integrating the activities of all federal agencies involved in immunization efforts. In addition, NVPO coordinates and provides logistical support for and subject matter expertise to NVAC.

NVAC is a federal advisory committee formed to “advise and make recommendations to the Director of the NVP on matters related to the program’s responsibilities” (NVAC Charter, 2007, p. 1). Given the organizational structure laid out in the statute, NVAC has the potential to have a significant impact on national vaccine and immunization policy and practice. There is wide consensus, however, that NVAC has not achieved its potential. The fact that recommendations issued by NVAC are not routinely acknowledged by HHS and seem to have had little impact on policy considerations or development fuels frustration, particularly among NVAC members, about NVAC’s lack of influence.

This study seeks to identify the reasons that the committee has not had a greater impact and to suggest strategies to improve the effectiveness of the committee. The results of the evaluation will inform HHS, NVPO, NVAC, and other stakeholders regarding changes in organizational structures and processes that will increase the impact and effectiveness of NVAC in the future.

Analytic Approach

We used a multipronged approach to evaluate the impact and effectiveness of NVAC. We began by constructing a logic model to provide a clear understanding of the key elements of the advisory committee (e.g., inputs, activities, outputs, environment, stakeholders), how they relate to each other, and how they contribute to achieving NVAC’s long-term goals. The logic model was used to organize the evaluation and identify focus areas for the study.

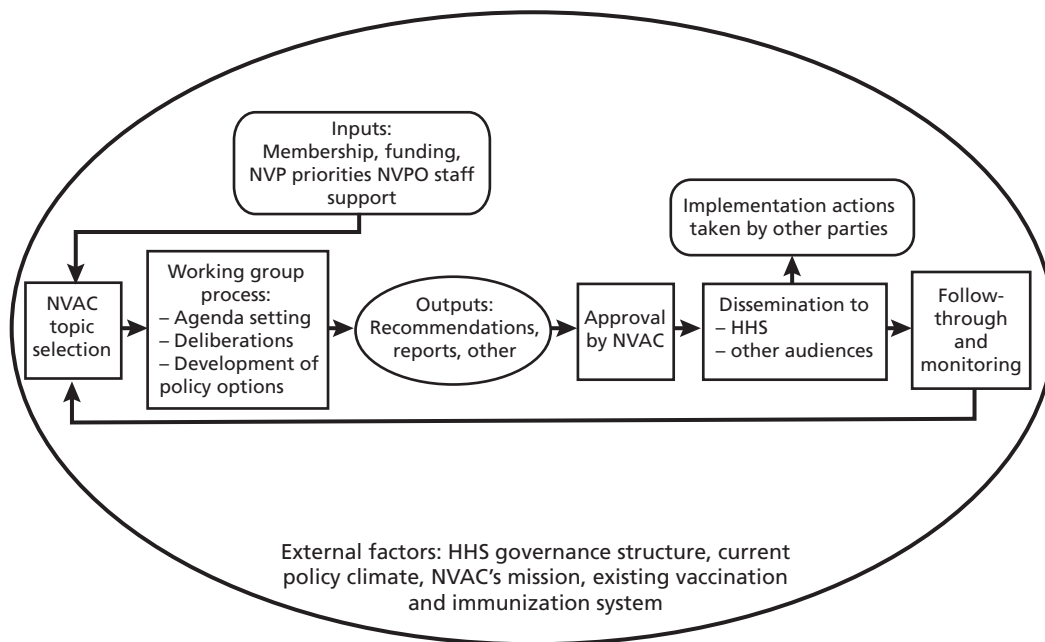
Multiple forms of data collection and analysis were used to inform the evaluation. First, we conducted a review of the literature on advisory committees to identify factors associated with their effectiveness. Second, we reviewed the set of recommendations made by NVAC since 1998 with a focus on characteristics, such as the target entity whose action was required for implementation, the level of specificity, and whether there was a measurable outcome. Finally, we conducted a series of 27 interviews with key informants to gather information on the perceived effectiveness of NVAC from a diverse set of stakeholders, including current and former NVAC members, representatives of stakeholder groups (e.g., professional medical societies, vaccine manufacturers), former assistant secretaries for health, and staff from HHS (i.e., NVPO and relevant HHS operating divisions).

Findings

The findings from this study are derived from a synthesis of the information collected through the literature review, the interviews, and the review of NVAC recommendations. They provide important insights regarding current barriers to implementation and help to identify potential solutions.

Figure S.1 presents a map of an idealized process for developing and implementing recommendations. The findings from the literature review and key informant interviews were organized into this framework.

Figure S.1
The NVAC Process



External Factors

It is important to note that the ability of NVAC to influence policy and practice surrounding vaccine and immunization is affected by the environment in which it operates. The environment is shaped by factors that are beyond the direct control of the advisory committee, such as the political climate, the existing vaccine and immunization system, the HHS governance structure, and NVAC's chartered mission. We identified two environmental factors, in particular, that may hinder NVAC's effectiveness: its mission and HHS's governance structure.

Mission. NVAC's mission, laid out in its charter, is very broad. NVAC is charged with advising the Director of the NVP on the entire range of vaccine and immunization policy issues. While some interviewees felt the broad mission gives NVAC the flexibility to address the vaccine and immunization topics that are most pressing, others felt that it created problems. For instance, some noted that the broad mission results in a lack of focus, hindering NVAC's effectiveness. Other interviewees indicated that the broad mission creates substantial overlap in the topics covered by NVAC and other vaccine-related advisory committees, particularly the Advisory Committee on Immunization Practices (ACIP).

HHS Governance Structure. Many of NVAC's recommendations require actions by HHS operating divisions, such as the Centers for Disease Control and Prevention (CDC), the Centers for Medicare and Medicaid Services (CMS), and the National Institutes of Health (NIH). The recommendations, however, are not transmitted to these agencies directly. Rather, they are sent to the ASH for consideration. Even if the ASH decides to pursue such recommendations, he or she does not have budgetary or line authority over the operating divisions. As such, the ASH must rely on influence to effect change.

Inputs

The ability of NVAC to effectively carry out its mission depends on its having access to adequate and appropriate resources. Findings from the literature review and the interviews suggest that problems with these inputs limit NVAC's effectiveness. There was a general consensus among interviewees that NVPO is underfunded and understaffed and that NVAC suffers as a result. Interviewees noted that NVPO's lack of resources hinders its ability to support NVAC's work processes, to assess NVAC recommendations, to conduct comprehensive implementation planning, to use their influence to foster implementation, and to fund related research and analysis.

While there was a general satisfaction with membership representation on the committee, interviewees noted several potential gaps. Many interviewees felt the public is underrepresented on NVAC. Interviewees also noted that NVAC could benefit from greater expertise in economics, policy analysis, and communications.

Topic Selection

Interviewees expressed a strong desire for greater input from the ASH regarding the issues of greatest importance to HHS. They felt that such input would help the committee select topics where there was greater opportunity to affect change. Without input from the ASH on the vaccine and immunization topics of interest to HHS, NVAC generates its own topics for consideration and runs the risk of developing recommendations for which there is no immediate audience.

Workgroup Process

Many interviewees noted that topic-specific temporary workgroups often include people from organizations that are not represented on NVAC (e.g., advocacy groups, additional consumer representatives, additional subject matter experts), which increases the effectiveness of the group's recommendations. These interviewees thought that allowing a broader spectrum of stakeholders to be involved in the process helped generate recommendations that are more relevant, acceptable, and feasible. Some interviewees, however, were concerned that having broader representation in the process could lead to watered-down recommendations, particularly if the workgroup tries too hard to reach consensus.

Outputs

NVAC produces a range of outputs—recommendations, guidelines, standards of practice, and thought pieces that can influence policy in practice. The literature on advisory committees points to another strategy for increasing effectiveness—formulating recommendations that are directly related to the committee's charter and that are clear, focused, well defined, and actionable (Gallup Organization, 2005). Our review of NVAC recommendations suggests that many do not meet these basic criteria. In particular, the recommendations are often not written in a way that is specific enough to be easily actionable. Instead, they are stated as principles and lack detail on what actions are needed and who needs to take them.

Dissemination

Interviewees felt that current dissemination methods were inadequate to reach a wide audience. NVAC needs to think more strategically about its dissemination efforts. This should include clearly delineating who the intended audiences are, identifying innovative and effective ways to reach them, and crafting messages in such a way as to motivate and inspire the audience to take action.

Implementation

There was a general sense among interviewees that many of NVAC recommendations for HHS and its operating divisions are not acted on. Moreover, NVAC rarely receives any substantive feedback regarding the recommendations it has made. The inaction on the part of HHS may reflect a lack of interest in NVAC's work because NVAC is not addressing the issues of highest priority for HHS. If this is the problem, then NVAC can be made more effective by seeking more input from the ASH in selecting topics for consideration by NVAC workgroups.

Follow-Through and Monitoring

NVAC's work should not end with dissemination. Rather, it needs to invest time and resources in monitoring the status of recommendations. Having a system in place to monitor whether a recommendation has been implemented will not only assist in measuring the impact of NVAC, but, more importantly, can also foster accountability. Currently, NVAC does little to determine whether its recommendations have been acted upon. Thus, it does not have the information needed to identify dissemination needs, target its dissemination efforts, or hold organizations accountable.

Strategies for Increasing the Effectiveness of NVAC

The strategies for improving the effectiveness of NVAC are not mutually exclusive. Rather, many are complementary and could even be synergistic. We present strategies for HHS (i.e., the Office of the Secretary of Health [OS] and ASH), NVPO, and NVAC, respectively.

Strategies for OS and ASH

- Provide input, at least annually, to NVAC on highest-priority vaccine and immunization issues for HHS.
- Provide feedback, at least annually, to NVAC on recommendations issued in the past year with regard to their usefulness (e.g., clarity, actionability, relevance), which recommendations will be pursued, and what actions will be taken, and reasons for not pursuing others.
- Take an active role in facilitating the implementation of recommendations.
- Consider increasing the number of public representatives on NVAC.
- Evaluate opportunities to increase expertise in policy, economics, and communications on NVAC.
- Improve coordination between NVAC and other vaccine-related advisory committees, particularly ACIP.
- Provide greater resources for NVPO both in terms of staffing and funds to support research and analysis.

Strategies for NVPO

- Provide more strategic direction to NVAC by clarifying and communicating the priorities of the National Vaccine Plan and identifying strategic opportunities to affect change.
- Work with the ASH to develop and execute implementation plans.
- Develop and provide NVAC with guidance for producing effective recommendations.
- Make the NVAC Web site more comprehensive and user friendly.
- Consider adding staff with expertise in policy, economics, and communications.

Strategies for NVAC

- Proactively seek input regarding priority vaccine and immunization issues for HHS through regular meetings with the ASH.
- Craft recommendations that are more specific in terms of what actions are needed, who should take them, and over what time period.
- Think strategically about how to reach intended audiences.
- Monitor the status of recommendations on a regular basis.

Although its potential has not been fully realized to date, NVAC could have a significant impact on vaccine and immunization policy and practice. The likelihood of achieving this

potential would be enhanced by a renewed commitment by the ASH, NVPO, and NVAC to work together to identify high-priority issues, develop innovative solutions, and actively foster implementation.

Acknowledgments

The authors would like to thank all the people who agreed to participate in the key informant interviews. Their contributions were extremely valuable and we appreciate their willingness to share their time and expertise. We also wish to thank Andrea Krull at the NVPO for all her assistance in obtaining information needed for the study. Finally, we have benefited from the comments of Chris Colwell and Jeffrey Wasserman, who reviewed a draft of this report. Of course, any errors or omissions are the sole responsibility of the authors.

Abbreviations

ACCV	Advisory Commission on Childhood Vaccines
ACIP	Advisory Committee on Immunization Practices
ASH	Assistant Secretary for Health
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare and Medicaid Services
FAC	federal advisory committee
FACA	Federal Advisory Committee Act
FDA	Food and Drug Administration
GSA	U.S. General Services Administration
HHS	Department of Health and Human Services
HSRA	Health Resources and Services Administration
NIH	National Institutes of Health
NVAC	National Vaccine Advisory Committee
NVP	National Vaccine Program
NVPO	National Vaccine Program Office
OS	Office of the Secretary
PHS	Public Health Service
USAID	U.S. Agency for International Development
VA	Department of Veterans Affairs
VFC	Vaccine For Children

Introduction

The National Vaccine Program (NVP), the National Vaccine Program Office (NVPO), and the National Vaccine Advisory Committee (NVAC) were established by the National Childhood Vaccine Injury Act of 1986 (P.L. 99-660). The law required the Secretary of the Department of Health and Human Services (HHS) to establish an NVP to achieve optimal prevention of human infectious diseases through immunization and to achieve optimal prevention against adverse reactions to vaccines. The Assistant Secretary for Health (ASH) has been designated by the secretary to serve as the director of the NVP and is supported in this role by NVPO and NVAC. NVPO, housed within the Office of Public Health and Science, manages the NVP. The primary functions of NVPO are to develop and implement strategies for achieving the goals of the NVP as delineated in the National Vaccine Plan, in large part by coordinating and integrating the activities of all federal agencies involved in immunization efforts. In addition, NVPO coordinates and provides logistical support for and subject matter expertise to NVAC.

NVAC is a federal advisory committee whose membership represents stakeholders with various roles in the development, manufacture, distribution, administration, financing, and use of vaccines. The voting members, as defined in Section 2105 of Title XXI of the Public Health Service (PHS) Act (42 U.S.C., Section 300aa-5, 2003), include “individuals who are engaged in vaccine research or the manufacture of vaccines, or who are physicians, members of parent organizations concerned with immunizations, representatives of State or local health agencies or public health organizations.” The NVAC charter expands upon this to include other stakeholders as nonvoting liaison members (e.g., representatives of health insurance plans, other vaccine-related advisory committees) and representatives of federal agencies—e.g., the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), the Department of Veterans Affairs (VA), the U.S. Agency for International Development (USAID)—serve as nonvoting ex officio members.

The charter calls for NVAC to “advise and make recommendations to the Director of the NVP on matters related to the Program’s responsibilities” (NVAC Charter, 2007, p. 1). The committee achieves this through the following functions outlined in Section 2105 of P.L. 99-660 and included in its charter:

- Study and recommend ways to encourage the availability of an adequate supply of safe and effective vaccination products in the United States.
- Recommend research priorities and other measures the director of the National Vaccine Program should take to enhance the safety and efficacy of vaccines.

- Advise the director of the National Vaccine Program in implementation of Sections 2102 and 2103 of the PHS Act.
- Identify annually for the director of the National Vaccine Program the most important areas of government and nongovernment cooperation that should be considered in implementing Sections 2102 and 2103 of the PHS Act.¹

Given the organizational structure laid out in the statute, NVAC has the potential to have a significant impact on national vaccine and immunization policy and practice. There is wide consensus, however, that NVAC has not achieved that potential. The fact that recommendations issued by NVAC are not routinely acknowledged by HHS and seem to have had little impact on policy considerations or development fuels frustration, particularly among NVAC members, about NVAC's lack of influence. In fact, frustration with the apparent disconnect between NVAC recommendations and HHS actions related to vaccines and immunization policy has become a common topic of discussion at NVAC meetings.

At the same time, there is a growing need for policy input on vaccine and immunization issues. For instance, the American Recovery and Reinvestment Act of 2009 provided substantial funding for immunizations, clearly a place where policy advice from advisory committees such as NVAC can help ensure the funds are used in the most effective way. In addition, NVPO is currently leading an effort to update the 1994 National Vaccine Plan. NVAC could play a substantial role in helping define the goals and objectives of the plan and in identifying strategies to achieve them.

To ensure that NVAC is able to function effectively and provide the needed input, NVPO contracted with RAND to identify the reasons that the committee has not had a greater impact and to suggest strategies to improve the committee's effectiveness. The results of the evaluation will inform HHS, NVPO, NVAC, and other stakeholders regarding changes in organizational structures and processes that will increase the impact and effectiveness of NVAC in the future.

Organization of the Report

This report presents the results of the evaluation of NVAC and is organized as follows. Chapter Two describes the analytic approach we took in conducting the evaluation. Chapter Three makes up the main body of the report, providing a detailed description of the findings. Finally, Chapter Four presents strategies for improving the impact and effectiveness of NVAC.

¹ The responsibilities of the director of the National Vaccine Program, as described in Section 2102, include aspects of vaccine research, vaccine development, vaccine safety and efficacy testing, vaccine licensing, vaccine production and procurement, vaccine distribution and use, coordination of governmental and nongovernmental activities, and providing funding for federal agency activities.

Analytic Approach

We used a multipronged approach to evaluate the impact and effectiveness of NVAC. We began by constructing a logic model to provide a clear understanding of the key elements of the advisory committee (e.g., inputs, activities, outputs, environment, stakeholders), how they relate to each other, and how they contribute to achieving NVAC's long-term goals. The logic model was used to organize the evaluation and identify focus areas for the study.

Multiple forms of data collection and analysis were used to inform the evaluation. First, we conducted a review of the literature on advisory committees to identify factors associated with their effectiveness. Second, we reviewed the set of recommendations made by NVAC since 1998 with a focus on characteristics, such as the target entity whose action is required for implementation, the level of specificity, and whether there is a measurable outcome. Finally, we conducted a series of interviews with key informants to gather information on the perceived effectiveness of NVAC from a diverse set of stakeholders, including current and former NVAC members, representatives of stakeholder groups (e.g., professional medical societies, vaccine manufacturers), former assistant secretaries for health, and staff from HHS (i.e., NVPO and relevant HHS operating divisions). We discuss our research methodologies for each element of the study in more detail below.

Literature Review

The review took a broad perspective and sought information from a variety of public policy domains because many of the factors that drive effectiveness (e.g., committee structure, process used to formulate recommendations) are common to advisory committees generally. As such, lessons learned from other advisory committees provide important insights regarding the factors that are likely to impact the effectiveness of NVAC recommendations.

We conducted a bibliographic search using such computerized databases as Social Sciences Abstracts, PubMed, Google, and Google Scholar. Searches used combinations of different terms, such as "federal advisory committee," "scientific advice," "government," and "effectiveness." Upon completing the online searches, we retrieved all promising documents for closer review. The relevant articles were summarized and the information was used to inform the development of the discussion guide for the interviews and the identification of strategies for improving the impact and effectiveness of NVAC.

Review of NVAC Recommendations

The first step in our review of NVAC recommendations was to identify and classify the set of NVAC recommendations that had been issued since 1998. Because there is no central repository for all NVAC recommendations, we used a variety of sources to compile a comprehensive list. We reviewed the documents on the NVAC Web site, including reports, resolutions, and presentations from NVAC meetings. We supplemented this information with searches of electronic databases, such as Medline and LexisNexis, to identify documents (including, but not limited to, peer-reviewed journal articles, government reports, and articles in the popular press) related to NVAC recommendations. Finally, NVPO provided additional documents, such as minutes from early NVAC meetings, that were not available online. In practice, it was often difficult to tease out what the exact recommendations were in these documents. For example, in some cases they were embedded within paragraphs. Thus, it is possible that different individuals reviewing the documents could come up with a slightly different set of recommendations, due primarily to differences in how they were grouped (e.g., one person might combine two related statements into one recommendation whereas another person might count them separately). We reviewed the initial list compiled from these sources and deleted duplicate recommendations (for example, if the same recommendation was pulled from an NVAC report and an associated journal article). The final list included 204 “unique” recommendations made by NVAC since 1998.

Once the list had been finalized, we classified the recommendations in terms of their target (whose action is required), level of specificity (extent to which it clearly identifies target and specific action to be taken), and measurability (extent to which a clear outcome can be assessed to have resulted from implementation of the recommendation). These characteristics were identified through the literature review as being related to implementation.

Interviews with Key Informants

Our process for conducting interviews with key informants had four components: selecting interviewees, developing a discussion guide for the interview, conducting the interviews, and analyzing the interview data.

Selecting Interviewees

Because we sought to obtain a broad range of perspectives regarding NVAC, we selected interviewees from a variety of groups, including current and former NVAC members, current and former ex-officio NVAC members (nonvoting representatives of federal agencies and departments, such as CDC, the Food and Drug Administration (FDA), and the Department of Defense), stakeholder groups (e.g., professional medical societies, vaccine manufacturers), former assistant secretaries for health, and staff from HHS (i.e., NVPO and relevant HHS operating divisions). We developed an initial list of potential interviewees in each of these categories and then worked with NVPO to identify additional people to be included. Potential interviewees were then contacted and asked to participate in the study. Though no one declined initially, two interviews were cancelled during the early weeks of the H1N1 flu epidemic and were not rescheduled.

In total, we interviewed 27 people (out of 29 approached and scheduled). Table 1 shows a detailed breakdown of the interviews across categories. It should be noted, however, that while some interviewees could be classified in multiple categories (e.g., former member and stakeholder), for the purposes of the table below we have classified people into only one to make the categories mutually exclusive. Of the nine current and former NVAC members that were interviewed, three had served as chair of the committee.

Developing the Discussion Guide

The review of the literature and of the NVAC recommendations informed the development of the discussion guide for the key informant interviews. For additional background, we reviewed the information on NVAC contained in the Federal Advisory Committee Act (FACA) database, which is maintained by the General Services Administration.

Separate discussion guides were developed for NVAC members, HHS staff, and stakeholders. However, there was substantial overlap in the topics covered with each group. The main topics covered in all interviews were

- perceptions of NVAC and its mission
- NVAC's relationship with NVPO and NVP
- NVAC's most notable achievements and missed opportunities
- appropriateness of NVAC membership
- NVAC's organizational structure
- topic selection and agenda setting processes
- process for formulating recommendations
- quality of NVAC recommendations
- NVAC's dissemination activities
- NVAC's activities to monitor the status of recommendations
- suggestions for improving the effectiveness of NVAC.

In addition to these topics, when we spoke with former assistant secretaries for health and current and former NVPO staff, we asked about how NVAC members are selected and whether and how feedback is provided to NVAC.

The discussion guides were submitted to, and approved by, RAND's Human Subjects Protection Committee.

Table 1
Breakdown of Key Informant Interviews
by Category of Interviewee

Category	Number of Interviews
NVAC members	9
Ex-officio NVAC members	5
HHS staff	7
Stakeholders	6
Total	27

Conducting Interviews

Telephone interviews were conducted by two-person teams consisting of an interviewer and a note taker. Interviews were conducted in April and May 2009. At the beginning of each interview, participants were verbally administered informed consent. The interviews typically lasted between 30 minutes and one hour. After each interview, the notes were reviewed to ensure that the discussion had been accurately captured.

Analyzing the Interview Data

Once the interviews were complete, a coding scheme composed of a set of themes and associated subthemes was developed based on the discussion guide and interview data. The content of each interview was then coded according to the scheme and the category of the interviewee (i.e., NVAC member, HHS staff, stakeholder). Over one-third of the interviews were coded by two different analysts to verify intercoder reliability. When inconsistencies were identified, the two coders worked together to reconcile differences. The data were then merged together and sorted by theme and interviewee category to facilitate within- and between-group comparisons.

Our analysis of these data sought to identify common perceptions within themes (e.g., the mission of NVAC, NVAC's most noteworthy achievements) paying particular attention to similarities and differences across the interviewee categories. To organize and synthesize the results, the key findings from the interview data were mapped into the key components of the logic model: the environment in which NVAC operates, inputs into the NVAC process, NVAC activities, NVAC outputs, and the short- and long-term outcomes of interest.

Findings

In this chapter, we first describe the logic model and how it informs the evaluation. We then present the findings regarding factors that contribute to or detract from NVAC's effectiveness. Our findings reflect a synthesis of the information collected through the literature review, the key informant interviews, and the review of NVAC recommendations.

Logic Model for NVAC

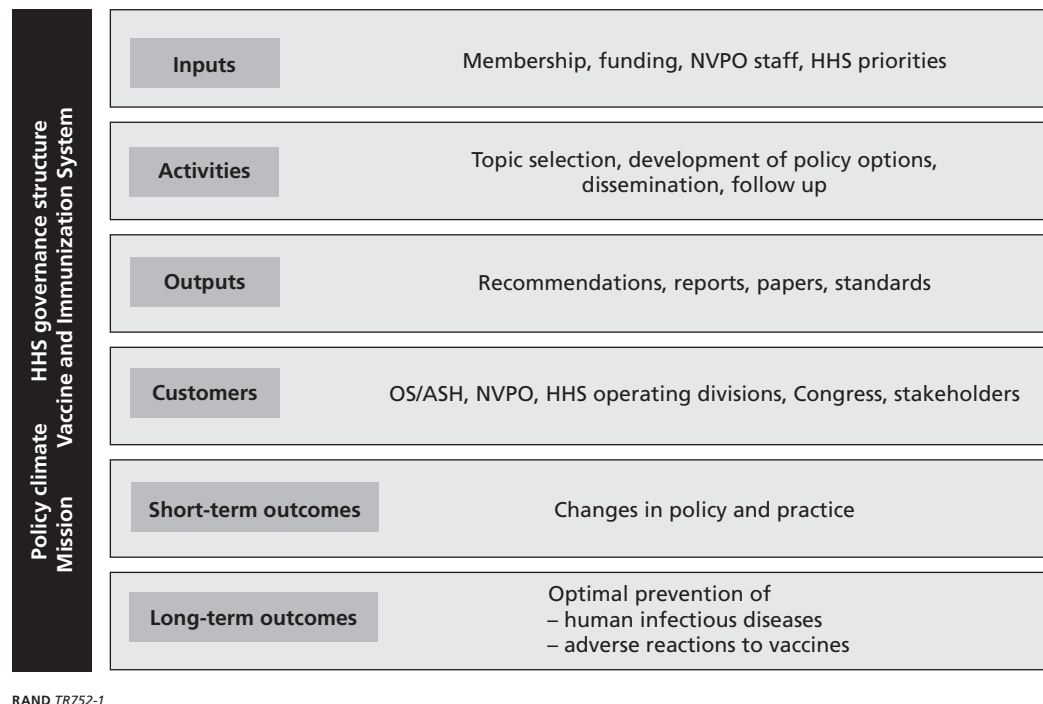
As described in the National Childhood Vaccine Injury Act of 1986, the goal of the NVP is to achieve optimal prevention of human infectious diseases through immunization and to achieve optimal prevention against adverse reactions to vaccines. The National Vaccine Plan, which is currently being updated, is meant to lay out a set of objectives and a strategic direction for the NVP. NVAC is chartered to "advise and make recommendations to the Director of the NVP on matters related to the Program's responsibilities" (NVAC Charter, 2007, p. 1). The logic model, depicted in Figure 1, identifies the key elements of the advisory committee (e.g., environment, inputs, activities, outputs, customers) and illustrates how they relate to each other and how they contribute to the achievement of the NVP goal. This logic model serves as an organizing structure for the findings presented here.

The logic model is designed to illustrate how NVAC is expected to work in theory. Walking through the logic helps to identify assumptions and relationships deemed critical for achieving the short- and long-term outcomes.

First, it is important to note that the ability of NVAC to influence policy and practice surrounding vaccine and immunization is affected by the environment in which it operates. The environment is shaped by factors that are beyond the direct control of the advisory committee, such as the political climate, the existing vaccine and immunization system, the HHS governance structure, and NVAC's chartered mission. To be effective, NVAC must be cognizant of these factors and find ways to work constructively within the constraints imposed by this environment.

Within this environment, the NVAC process is expected to work as follows: The inputs into the advisory committee, such as the members' time and effort, funding, and staff support from NVPO, allow NVAC to undertake a set of activities. These activities, including the selection of topics for consideration, formulation of recommendations, writing of papers and reports, and dissemination, combine to generate the committee's output. For NVAC to influence policy and practice, the output must be received and acted upon by other parties, including

Figure 1
Logic Model for NVAC



the ASH, entities outside the authority of the ASH (e.g., CDC, NIH, FDA) and entities outside the federal government (e.g., health plans, vaccine manufacturers). This is challenging because the committee does not have direct or even indirect control over these parties and must therefore identify the steps it can take (e.g., changes in how topics are selected, changes in how recommendations are formulated) to increase the likelihood that its recommendations are acted upon.

The findings presented in the following sections provide important insights regarding current barriers to implementation and help to identify potential solutions.

The Context and Environment in Which NVAC Operates

As noted above, the ability of NVAC to influence vaccine and immunization policy and practice is determined, in part, by the context and environment in which it operates. Moreover, the factors that define the environment are largely outside of NVAC's control. We identified two environmental factors, in particular, that may hinder NVAC's effectiveness: its mission and HHS's governance structure.

NVAC's Mission

NVAC's mission, as specified in its charter, is very broad. NVAC is charged with advising the director of the NVP on the entire range of vaccine and immunization policy issues. As seen in Figure 2, the vaccine and immunization enterprise includes a wide range of activities and processes. Reflecting NVAC's broad mission, our review of recommendations made since 1998

eral interviewees suggested that one option for doing so would be to have NVAC and ACIP meet jointly at least once a year.

HHS Governance Structure

Many of NVAC's recommendations require actions by HHS operating divisions, such as the CDC, Centers for Medicare and Medicaid Services (CMS), and the National Institutes of Health (NIH). The recommendations, however, are not transmitted to these agencies directly. Rather, they are sent to the ASH for consideration. Even if the ASH decides to pursue such recommendations, he or she does not have budgetary or line authority over the operating divisions. As such, the ASH must rely on influence (e.g., communicating priorities, calling meetings) to effect change.

The successful use of influence to facilitate implementation of recommendations requires a significant investment of time and effort. Some interviewees argued that NVPO could play a more substantial role in supporting the ASH in such efforts. However, they also noted that NVPO's influence is constrained by limited infrastructure to conduct its work and limited resources to fund the research and analysis that would give the operating divisions an incentive to make the requested changes. Even with a substantial investment of time and effort to foster interest in a recommendation and convince relevant stakeholders that change is needed, there is no guarantee that the efforts will be successful. A number of interviewees noted the time investment and the uncertain payoff as reasons why many NVAC recommendations are not acted on.

In an effort to address the problems created by the governance structure within HHS, NVAC's 2008 State of the Program Report recommends that "[T]he NVP should be given the resources and effective organizational authority within HHS necessary to carry out its mission to coordinate and direct vaccine-related efforts of the federal PHS agencies" (NVAC, 2009, p. 2). However, implementation of this recommendation would require major changes to the organizational structure of HHS. Implementation would, in effect, revert the role of the ASH back to what it had been in the past when the ASH had direct authority and controlled the budget, making it much easier to coordinate activities and make changes in vaccine and immunization policy and programs.

Barring changes to the governance structure of HHS, NVAC can take actions to maximize return on the investment of time and effort by the NVPO and the ASH in implementation. Making a clear case for implementation can motivate the ASH and NVPO to consider the recommendation and arms them with the information they need to make the case to stakeholders that the change is worthwhile. For instance, when transmitting recommendations to the ASH, NVAC should clearly outline the value of implementation (e.g., a more stable vaccine supply, increases in coverage among underserved populations, cost savings), both overall and relative to other policy options.

The results from the interviews indicate that there is some confusion regarding the relative roles and responsibilities of NVAC and NVPO. In some cases, interviewees did not make a distinction between the two, using the names interchangeably. This may be due, in part, to the fact that NVPO staff play a substantial role in the NVAC process, contributing to topic selection, staffing and guiding workgroups, and drafting reports. Thus, it is hard to distinguish NVAC from NVPO.

The NVAC Process

While the external environment affects NVAC's ability to influence vaccine and immunization policy and practice, the internal NVAC structures, processes, and outputs are arguably more important in determining NVAC's impact. Not only do they directly shape the recommendations made, they are also within the control of the committee and are thus easier targets for improvement efforts. That is, it is likely both easier and more effective to make changes to internal factors (e.g., improve dissemination of recommendations) than to try to change the environment in which NVAC operates (e.g., change the governance structure within HHS).

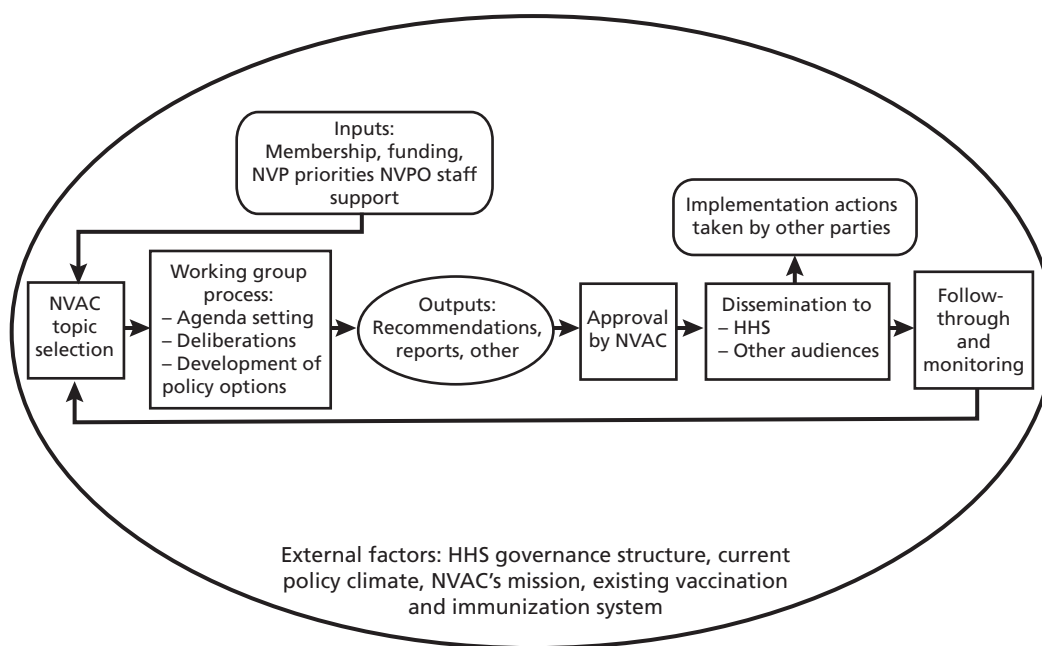
Figure 3 shows a map of the actions required to develop, promote, and monitor implementation of NVAC's recommendations. The map illustrates the key components of the system and demonstrates how they are connected to each other. Below, we discuss findings related to factors associated with the effectiveness of NVAC for each component of the process.

Inputs into the NVAC Process

The ability of NVAC to effectively carry out its mission depends on its having access to adequate and appropriate resources. Inputs such as financial and logistical support from HHS and the expertise of the NVAC members enhance NVAC's ability to develop, disseminate, and foster the implementation of recommendations. Findings from the literature review and the interviews suggest that problems with these inputs limit NVAC's effectiveness.

Resources and Funding. There was a general consensus among interviewees that NVPO is underfunded and understaffed and that NVAC suffers as a result. Interviewees noted that

Figure 3
The NVAC Process



NVPO's lack of resources hinders its ability to support NVAC's work processes, to assess NVAC recommendations, to conduct comprehensive implementation planning, to use their influence to foster implementation, and to fund related research and analysis. One interviewee noted, "In the past, NVPO had more staff and more funding. It is difficult for NVPO to support NVAC and facilitate their work if NVPO does not have enough staff."

Interviewees noted that the lack of resources limits NVPO's ability to bring the relevant parties to the table. One interviewee suggested that "if there were a lot of funding at NVPO's discretion . . . each agency might pay more attention to NVAC recommendations." Others pointed out that NVPO does have some limited grant funds at its disposal to distribute to the agencies but argued that these funds are very limited and have decreased over time, falling from approximately \$4 million in fiscal year (FY) 2007 to \$2.2 million in FY 2009. At the same time, interviewees argued that the funds have not always been used strategically to foster implementation. For example, one interviewee argued that "the funding should be better linked with priorities." Interviewees suggested that, to be successful, NVPO needs to be more strategic in its approach to implementing NVAC recommendations and to take advantage of all the tools at its disposal.

Membership. NVAC is subject to the Federal Advisory Committee Act (FACA) of 1972 (P.L. 92-463), which regulates how government agencies seek outside expert advice, counter undue influence of special interest groups, and allow the public to participate actively in the federal government's decisionmaking processes. It mandates that advisory committees consist of experts and stakeholders who represent diverse points of view, which are balanced throughout the committee, to ensure that the recommendations are fair and comprehensive (Faure, 1996, Michaels et al., 2002).

Supporters of the balanced membership requirement argue that the FACA's goal was to increase the diversity of advice sources, expose federal advisory committees (FACs) to public scrutiny, and to prevent illegal cooperation between agencies and private entities (Norris-York, 1996). Critics of this requirement, however, argue that balanced membership is likely to lead to the creation of heterogeneous groups, which often have more difficulties in reaching decisions, compared to homogeneous groups, and to the creation of the committees with inferior combined level of expertise (Karty, 2005).

In contrast, a survey of members of various FACs conducted for the U.S. General Services Administration (GSA) suggests that balanced representation, both in terms of points of view and stakeholders, increases members' perceived effectiveness of their advisory committees (Karty, 2005). Additional qualitative interviews with the same individuals revealed that heterogeneity among FACs' members increased the perceived effectiveness of FACs by better signaling critical information to a chartering agency, providing a more comprehensive overview of possible arguments and potential challenges, and building a dialogue between stakeholders with opposing positions (Karty, 2005).

The interviews conducted for this project generally support the notion that improving the balance of NVAC's membership would improve its effectiveness. While there was a general satisfaction with representation on the committee, interviewees noted several potential gaps. Many interviewees felt that because the committee currently includes only one consumer representative, the public is underrepresented on NVAC. They argued that a single member cannot fairly represent the diversity of public perspectives and concerns. They also argued that having greater public representation could help shape NVAC recommendations, so that they would be more acceptable to the public and thus more likely to be implemented. Several interviewees

contrasted NVAC's membership to that of the Advisory Commission on Childhood Vaccines (ACCV), which advises the secretary of HHS on issues related to the Vaccine Injury Compensation Program. ACCV includes equal representation of consumers, health professionals, and attorneys. Other interviewees felt that while increasing public representation is desirable, it can be difficult to identify appropriate people. One interviewee noted, "NVAC needs consumer representatives that are constructively critical, question the dogma, and are strong advocates for the public. They need to be willing to ask lots of questions and this is a tall order to fill."

Other interviewees thought that pediatricians were overrepresented on the committee. Of the 17 voting members, five are physicians or research scientists specializing in pediatrics. By comparison, there are only two representatives of state and local health departments and as noted above, only one member of a parent organization.

Interviewees also noted that NVAC could benefit from greater expertise in economics and policy analysis. Providing good recommendations requires comprehensive policy analysis. This entails a clear statement of the policy problem, the development a set of policy options, and the assessment of the options relative to predetermined criteria (e.g., effectiveness, cost, and feasibility). The systematic assessment of the options helps to identify trade-offs and informs decision-making. Interviewees felt that having greater economic and policy expertise on the committee would facilitate this type of analysis, encourage the committee to consider all relevant criteria, and ultimately improve the quality and feasibility of the committee's recommendations.

In addition, several interviewees suggested that NVAC lacks expertise in communications, limiting its ability to identify and effectively reach its target audiences. For instance, they felt that NVAC's recommendations are often lost within lengthy reports and that communication experts could help the committee shape, prioritize, and clearly articulate the key messages in each report, making it easier for stakeholders to understand and potentially act upon them. For example, one interviewee complained that NVAC reports are often "thorough review articles on a topic, rather than strategic policy recommendations." In addition to improving the content of the report, other interviewees indicated that communications experts could help develop more effective dissemination plans. Moreover, they noted that without effective dissemination it does not matter how good the recommendations are—they will not get implemented. One interviewee noted, "Recommendations at different times have garnered more or less public attention depending on how they were promulgated. Those promulgated most widely have forced public debate on those issues."

While the problems associated with a lack of expertise on policy, economic, and communications could be addressed through changes in NVAC membership, some interviewees noted that it could also be done through changes in the staffing at NVPO. Moreover, they thought having this expertise in NVPO and available to NVAC might be a more efficient way to ensure that all NVAC products benefit from its input.

Topic Selection

While most interviewees felt that NVAC typically addresses the most important vaccine and immunization issues, they identified several topics that they felt NVAC has not adequately addressed in the past. These topics include issues related to vaccine supply, community-based prevention, vaccine delivery systems, and education of the public and health care professionals about the benefits and risks of vaccination.

In addition, interviewees expressed a strong desire for greater input from the ASH regarding the issues of greatest importance to HHS. They felt that such input would help the com-

mittee select topics in areas where there was greater opportunity to affect change. This notion is supported in the literature, which indicates that a strong line of communication between an advisory committee and its chartering body is associated with greater perceived effectiveness (Gallup Organization, 2004).

The level of communication between the ASH and NVAC has varied over time, with some ASHs being much more interested and involved with NVAC. Several former ASHs described a process in which they sat down with the NVPO director and the NVAC chair on a regular basis to set the agenda. At the same time, several current and former members noted that they could not recall the ASH asking NVAC to consider a specific issue at any time during their tenure.

In addition, interviewees indicated that the HHS operating divisions, such as CDC, NIH, and the Health Resources and Services Administration (HRSA), could work more directly with NVAC and request that the committee consider topics and issues that are of particular interest. This has happened on occasion, but it is not a regular occurrence.

Without input from the ASH or other HHS operating divisions, on the vaccine and immunization topics of interest to HHS, NVAC generates its own topics for consideration and runs the risk of developing recommendations for which there is no immediate audience. One interviewee contrasted the NVAC process to those of the Institute of Medicine and the Government Accountability Office, which specifically ask for reports on particular subjects. In such a case, the requestor “wants to see the report and do something with it. They want to take action.”

A number of interviewees argued that even in the absence of greater input from the ASH, leadership from NVPO could provide strategic direction for NVAC. However, they noted that such leadership was generally lacking. Specifically, one interviewee said that “NVPO is non-strategic in terms of opportunities,” and worried that perhaps the office “is lacking the skill sets necessary to actually execute plans.” Another argued that “NVPO’s fundamental problem is a lack of strategic direction. The topics are being driven as ‘one-hit wonders’—it’s not strategic planning.” The 2008 Draft Strategic National Vaccine Plan is thought by many to be a step in the right direction. However, interviewees noted that only time will tell if the plan will be actively used to guide NVAC and the topics it considers.

Workgroup Process

The bulk of NVAC’s work is conducted in temporary, topic-specific workgroups. The temporary nature of the workgroups represents a recent change in structure that was meant to increase NVAC’s productivity and effectiveness. In the past, there were standing subcommittees on particular topics, a structure that was thought to limit NVAC’s ability to shift directions as new topics arise. There was a consensus among interviewees that the move to temporary committees has made a difference and has allowed NVAC to take on issues in a more timely way. As evidence, at the most recent NVAC meeting (June 2009), the committee decided to form a workgroup (a subgroup of the Vaccine Safety Workgroup) to advise HHS on vaccine and immunization issues related to the H1N1 (swine flu) epidemic.

Workgroup activities can be very time intensive. Several current and former NVAC members noted that they were surprised by how much time workgroup participation requires, noting that at the height of the group’s activities they typically meet approximately once a week for at least an hour. One interviewee said, “This is a lot of time to place on people who are members of advisory committees given that they have other full-time jobs.” In addition,

the workgroup process requires substantial support from NVPO. While the type and level of support differ some across workgroups depending on what the chair requests, NVPO typically provides logistical support (e.g., to plan and coordinate meetings), subject matter expertise, and writing assistance. In many cases, an NVPO staff member assigned to a workgroup is asked to be the primary writer, synthesizing the committee's discussion in draft documents for the group to review and comment on. As noted before, there was a consensus among interviewees that NVPO is understaffed, limiting its ability to effectively support the NVAC workgroups.

Many interviewees noted that workgroups often include people from organizations that are not represented on NVAC (e.g., advocacy groups, additional consumer representatives, additional subject matter experts), which increases the effectiveness of the group's recommendations. They thought that allowing a broader spectrum of stakeholders to be involved in the process helped generate recommendations that were more relevant, acceptable, and feasible. Some interviewees were concerned, however, that having broader representation in the process could lead to watered-down recommendations, particularly if the workgroup tries too hard to reach consensus.

In recent years, NVAC has moved toward greater public engagement. The Vaccine Safety Workgroup was often noted by interviewees as an example of a workgroup that has used an extensive public engagement process to inform their work. One interviewee said, "The work of the Vaccine Safety Workgroup has been uniquely different in terms of transparency and public engagement. It is a great accomplishment." Interviewees typically argued that public engagement is important because it provides the committee with a better understanding of the range of perspectives and concerns that people have. Moreover, involving people in the process can generate buy-in for the recommendations and facilitate their implementation.

Evidence from the literature, however, indicates that some possible unintended consequences are associated with greater public participation. For example, public participation in meetings may reduce the committee members' willingness to express their opinions (Karty, 2005). Moreover, research tends to suggest that openness has a negative impact on the perceived effectiveness of the committee among its members: It increases the length of the meetings, can allow individuals with strong opinions to dominate the discussions, and can cause rehashing of the same issues or concerns (Karty, 2005).

In addition, some interviewees noted that the process of public participation can take a long time, thus lengthening the time required to develop and issue recommendations. These interviewees were concerned that the increase in time to issue recommendations could reduce their relevance and thus their likelihood of implementation.

Transparency and public participation are priorities of the current administration. As such, NVAC needs to identify public engagement strategies that balance the pros and cons associated with public participation.

NVAC Outputs

NVAC produces a range of outputs— recommendations, guidelines, standards of practice, and thought pieces that can influence policy in practice. When asked which NVAC products have had the largest impact, many interviewees cited the measles white paper (NVAC, 1991) and the Standards for Pediatric Immunization Practice (NVAC, 2003). These products were thought to be effective for different reasons. With the measles white paper, a number of interviewees suggested the importance of two critical factors: timing and an active effort to disseminate the work to key policymakers. The paper linked the increases in the number of measles cases

experienced in the early 1990s to a failure to provide vaccine to vulnerable children on the recommended schedule. The paper identified the barriers to vaccination and offered a set of possible solutions. Many of the recommendations were acted upon. For example, the paper called for the creation of standards of immunization practices and greater federal grant support for state immunization programs. The standards were subsequently developed and many attribute the development of the Vaccine For Children (VFC) program to the recommendations in the measles white paper.

Several interviewees indicated that the recommendations were acted upon because the increase in measles cases created a sense of urgency among policymakers. This urgency created an important opportunity for NVAC to make recommendations that would not only address the measles outbreak but also improve the vaccination system more generally (e.g., the VFC). Others commented that the measles white paper was effective because “it was strategic and there were methods that were found to get that document to people that were in a decisionmaking capacity—that was critical.” Many of the recommendations made in the paper required congressional action to be implemented. Interviewees indicated that there had been a significant effort made by NVAC members and other stakeholders to bring the recommendations to the attention of policymakers and make the case for implementation. While the general sense among interviewees was that the paper was effective, a small number of interviewees suggested that some of the changes recommended were already in process and would have happened anyway.

Interviewees felt that the Standards for Pediatric Immunization Practice have had a substantial impact on clinical practice. One interviewee noted that they represented “the first time anybody anywhere said, if you’re giving a vaccine, wherever that is, here are the minimum standards that should be incorporated in the process. For me, that really filled a gap.”

These successes offer some insights regarding strategies that can be employed to increase the effectiveness of NVAC’s outputs. For example, one lesson from the measles white paper is the importance of identifying and taking advantage of strategic opportunities that arise from outside events that change the policy climate. Another lesson is that having a well-thought-out and active dissemination plan is key to implementation.

The literature on advisory committees points to another strategy for increasing effectiveness: formulating recommendations that are directly related to the committee’s charter and that are clear, focused, well defined, and actionable (The Gallup Organization, 2005). Our review of NVAC recommendations suggests that many do not meet these basic criteria. In particular, the recommendations are often not written in a way that is specific enough to be easily actionable. Instead, they are stated as principles and lack detail on what actions are needed and who needs to take them. Figure 4 provides some specific examples. In these cases, the recommendation represents a “good idea,” but offers little to HHS or other stakeholders about how it should be done, making it less likely that an action will be taken. Moreover, many of these recommendations are not easily measurable, so it is difficult for NVAC to assess whether they have been implemented or whether they have had the intended impact.

The recommendations shown in Figure 4 could be improved by providing more specific details regarding the actions that should be taken, by whom, and over what period of time. For example, there are numerous ways to approach increasing the annual rate of influenza vaccination among health care workers (e.g., mandates, education, financial incentives). This recommendation would be more useful if it reflected an assessment of the various policy options

Figure 4
Examples of NVAC Recommendations That Are Not Specific

"The CDC and state and local immunization programs should focus resources on underimmunized populations at risk of vaccine-preventable diseases."

"The safety and efficacy of new vaccines should continue to be evaluated."

"Increase the rate of annual influenza vaccination among health care workers."

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and clearly stated which policies are preferable and whose actions are required to implement them.

Dissemination

Promoting implementation of NVAC recommendations requires effective dissemination to audiences both inside and outside of HHS. Communication to outside audiences can serve several purposes. First, it can promote implementation by informing providers, health plans, consumers, and other stakeholders about the recommendations targeted at them. Second, it can generate support for recommendations targeted at HHS. That is, NVAC can influence public opinion and potentially jumpstart a public call for action.

Although there is a specific mechanism in place for transmitting recommendations to HHS (i.e., through a letter from NVAC to the ASH), the methods used to reach other audiences are varied. The methods interviewees report using most often include posting information (e.g., presentations and reports) on the NVAC Web site and publishing journal articles. However, they also noted limitations with both of these methods. First, posting information on a Web site is a passive form of communication. Some interviewees argued that NVAC needs to be more active and push information out to the audiences it wishes to reach. In addition, it was argued that the NVAC Web site needs to be more comprehensive (for example, some reports are not available online) and information should be posted in a more timely fashion.

Second, although interviewees agreed that publishing in academic journals is valuable, many felt that it was not enough, particularly if the recommendations was targeted at clinicians. One problem noted was that publication in peer-reviewed journals can take a long time and may not be the most expedient way to disseminate the recommendations. In addition, one interviewee noted being "continually struck that NVAC is pretty invisible. You can't just stick [recommendations] in a journal; clinicians aren't going to read it." They felt that to reach those audiences, NVAC should consider other strategies, such as making presentations at professional meetings, seeking out press coverage, and identifying and cultivating "champions" within stakeholder groups to promote the recommendations. NVAC has begun to try some new methods for dissemination. For instance, a *Morbidity and Mortality Weekly Report* notice to readers was published, informing them about the passage of the vaccine finance recommendations and pointing them to the NVAC Web site for additional information.

These findings suggest that NVAC needs to think more strategically about its dissemination efforts. This should include clearly delineating who the intended audiences are, identifying

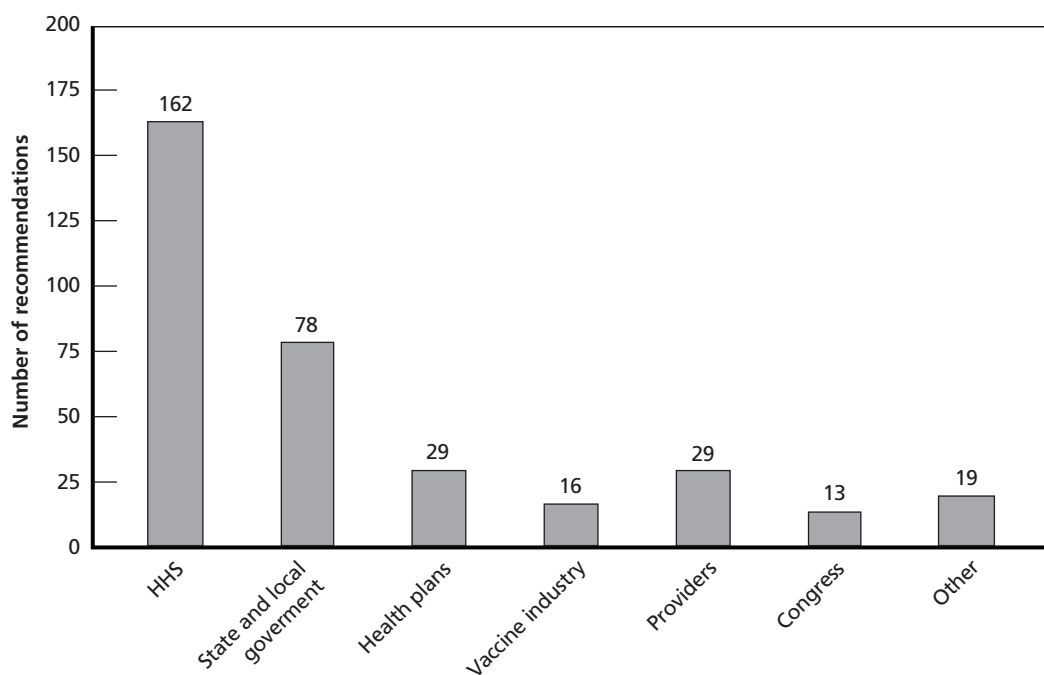
innovative and effective ways to reach them, and crafting messages in such a way as to motivate and inspire the audience to take action. Having greater communication expertise either on NVAC or in NVPO could facilitate better dissemination.

Implementation

One of the primary challenges that NVAC faces is that implementing its recommendations requires actions by other parties. Figure 5 illustrates the different parties targeted by NVAC recommendations. While the majority of the recommendations require action by HHS and its operating divisions (e.g., CDC, FDA, CMS, HRSA), a significant number are targeted at other organizations, such as state and local health departments, health plans, and health care providers. The categories shown in Figure 5 are not mutually exclusive; some recommendations require the action of multiple parties. Since NVAC does not have direct control over these organizations, its role in implementation is to inform the relevant parties about the recommendations, build support for them, and develop methods for holding the relevant organizations accountable.

There was a general sense among interviewees that many of NVAC recommendations for HHS and its operating divisions are not acted upon. Moreover, NVAC rarely receives any substantive feedback regarding the recommendations it has made. As one interviewee put it, “I’ve been frustrated that we’re talking to no one in particular a lot of the time. There’s no sense that anyone above NVPO is particularly interested.” The perceived lack of interest may be due in part to the fact that there have been five different ASHs since 2005.

Figure 5
Targets of NVAC Recommendations Since 1998



This sense of frustration is not unique to NVAC. In fact, a GSA survey of 933 members across 85 federal advisory committees indicates that there is widespread frustration and uncertainty among advisory committee members about the impact their committee has on policy-makers' decisions (Gallup Organization, 2005). Moreover, the survey revealed that advisory committee members are generally dissatisfied with the feedback they receive from their chartering agency.

The inaction on the part of HHS may reflect a lack of interest in NVAC's work because it is not addressing the issues of highest priority for HHS. If this is the problem, then NVAC can be made more effective by seeking more input from the ASH in selecting topics for consideration by NVAC workgroups. It is possible, however, that the inaction reflects not a lack of interest but rather other factors, such as the feasibility of the recommendations and the actions required for their implementation.

Different types of recommendations will require different types of actions by HHS, and those actions will vary in complexity and the level of effort required. NVAC needs to be cognizant of the complexity of the actions it is recommending. For recommendations that require more complicated actions, NVAC must make a more compelling case for implementation by clearly laying out the value that will be received. For example, a recommendation that requires incremental changes to a program (e.g., changing funding priorities in a grant program) will be much easier for HHS to implement than one that would require new regulatory authority or new legislation.

Several interviewees suggested that implementation would be improved if NVPO played a more substantial role in facilitating the actions required to implement NVAC's recommendations. One argued that NVPO "is a coordinating body whose plans are not instructive or directional. Their follow-through is lacking." For example, as noted before, several interviewees felt that NVPO does not make strategic use of its grant funds. They argued that if a recommendation is deemed a priority, then all the tools at NVPO's disposal (e.g., grant funds, meetings) should be used to promote implementation.

The dissemination methods described in the prior section are the primary means at NVAC's disposal to promote the implementation of recommendations targeted at stakeholders outside of government. HHS can also play an important role in facilitating implementation by using its influence to promote action. HHS can help by engaging stakeholders (e.g., sponsoring meetings) and making the case for action. Not only would such engagement help in disseminating information about the recommendations, it would also signal to stakeholders that HHS thinks the recommendations are important and values the stakeholders' efforts to implement them. Interviewees noted that while the ASH does not have direct control over these organizations, "what power the ASH does have is the pulpit."

Follow-Through and Monitoring

NVAC's work should not end with dissemination. Rather, it needs to invest time and resources into monitoring the status of recommendations. Having a system in place to monitor whether a recommendation has been implemented will not only assist in measuring the impact of NVAC but, more importantly, can also foster accountability. Currently, NVAC does little to determine whether its recommendations have been acted upon. Thus, it does not have the information needed to identify dissemination needs, target its dissemination efforts, or hold organizations accountable. NVAC has started some improvement efforts in this area. For example, efforts have recently been put in place to track action items from meetings and to include status

reports as part of NVAC meetings. Approximately one year after a set of recommendations has been issued, NVAC will revisit the recommendations to assess their current status.

It was particularly striking to interview participants that there is no system in place for the ASH to provide feedback to NVAC regarding its recommendations. Many interviewees felt that such a system would be very helpful in improving NVAC's effectiveness. The feedback from the ASH could include information on which recommendations are being pursued and what actions are being taken, the reasons for not taking up other recommendations (e.g., they are infeasible, there is no source of funding), and more generally the usefulness of the recommendations (e.g., whether are they relevant, clear, or actionable). With such communication, NVAC would have a better understanding of why certain recommendations are not acted upon and could then use this information to craft new recommendations that are more likely to be implemented.

Some interview participants thought that NVPO could play a bigger role in follow-through and in monitoring NVAC recommendations. In particular, it was suggested that once a decision has been made to pursue specific recommendations, NVPO should work with the ASH to develop and execute an implementation plan. As part of that plan, NVPO should work with the operating divisions to facilitate their participation and monitor whether requested actions are being taken.

Strategies for Increasing the Effectiveness of NVAC

In the preceding chapter, we presented our findings regarding factors that either help or hinder NVAC's ability to influence vaccine and immunization policy and practice. In this chapter, we offer a set of strategies for increasing the effectiveness of NVAC that are derived from our analysis and present some concluding thoughts.

Strategies

The strategies for improving the effectiveness of NVAC laid out in this section are certainly not mutually exclusive. Rather, many are complementary and could even be synergistic. We present strategies for HHS (i.e., OS/ASH), NVPO, and NVAC, respectively.

Strategies for OS/ASH

Provide input, at least annually, to NVAC on highest-priority vaccine and immunization issues for HHS. There is a need for greater communication between NVAC and HHS. NVAC would benefit from input from the ASH on the vaccine and immunization issues that are of greatest concern to the department. This will ensure that NVAC provides policy input where HHS needs it most.

Provide feedback, at least annually, to NVAC on recommendations issued in the past year with regard to their usefulness (e.g., their clarity, actionability, and relevance), which ones will be pursued and what actions will be taken, and reasons for not taking up others. Such feedback would not only demonstrate to NVAC that HHS is acting upon its recommendations, but could also be used by NVAC to inform a quality-improvement process. That is, if NVAC understands why certain recommendations are or are not pursued, it could use that information to craft future recommendations in a way that increases their likelihood of implementation.

Take an active role in facilitating the implementation of recommendations. HHS can help promote implementation by engaging stakeholders (e.g., sponsoring meetings) and making the case for action. Not only would such engagement help in disseminating information about the recommendations, it would also signal to stakeholders that HHS thinks the recommendations are important and values the stakeholders' efforts to implement them.

Consider increasing the number of public representatives on NVAC. It is difficult, if not impossible, for one public member to fairly represent the diversity of public perspectives on vaccine and immunization issues. Having greater public representation could help shape NVAC recommendations, so that they are more acceptable to the public and thus more likely to be

implemented. Given that the committee size is set, such a change would require adjusting the balance between the different stakeholder groups represented on the committee.

Evaluate opportunities to increase expertise in policy, economics, and communications on NVAC. Having such expertise could improve the feasibility of recommendations, thus increasing the likelihood of implementation. Building this expertise, however, does not necessarily require a larger committee. Rather, as existing members rotate off, NVAC could identify people within the categories of voting members (e.g., physicians, state and local health department officials, representatives of parent organizations) who have this type of expertise.

Improve coordination between NVAC and other vaccine-related advisory committees, particularly ACIP. The missions of the vaccine-related advisory committees chartered by HHS are interconnected and, in some cases, overlapping. Better coordination between them in terms of the topics being addressed and the actions recommended would lead to more comprehensive and consistent input for HHS and could increase the impact of recommendations.

Provide greater resources for NVPO, in terms of both staffing and funds to support research and analysis. With greater resources, NVPO would be able to provide better and more sustained support for NVAC work processes (e.g., staffing workgroups, planning meetings) and allocate more time and effort to promoting the implementation of NVAC recommendations. Moreover, having funds to support research and analysis would be a valuable tool that NVPO could use to encourage the operating divisions to implement recommended actions.

Strategies for NVPO

Provide more strategic direction to NVAC by clarifying and communicating the priorities of the National Vaccine Plan and identifying strategic opportunities to effect change. Having a strategic vision for the National Vaccine Plan will help crystallize how NVAC can be integrated into it and support it. Moreover, it will help to align the efforts of NVAC with the NVP more broadly and thus increase its impact.

Work with the ASH to develop and execute implementation plans. Having an implementation plan for those recommendations that are being considered for further action will assist the ASH in deciding whether to proceed. Moreover, for those that are selected, having a well-thought-out plan in place will facilitate implementation. To be effective, the plan should make use all available tools (e.g., convening meetings, using grant funds for related analyses) to promote implementation.

Develop and provide NVAC with guidance for producing effective recommendations. The committee would benefit from guidance from NVPO on the types of analysis and recommendations that are most useful to HHS. The guidance should include information on the criteria (e.g., effectiveness, cost, feasibility, equity) that are important to HHS and that should be considered in NVAC's analysis of various policy options. In addition, the guidance should lay out the characteristics of high-quality useful recommendations (e.g., clarity, focus, actionability) and should provide tips for identifying and communicating the value of implementation. Having this information in hand would help NVAC craft better recommendations and increase the likelihood of their implementation.

Make the NVAC Web site more comprehensive and user friendly. The NVAC Web site could be used more effectively as a means of disseminating its reports and recommendations to a broad audience. Having more comprehensive content and making it easily accessible would be useful. In addition, such improvements would help NVAC in formulating recommendations

(for example, providing the ability to more easily reference related reports done in the past) and in following up on outstanding recommendations.

Consider adding staff with expertise in policy, economics, and communications. NVAC workgroups would benefit from access to NVPO staff with expertise in policy analysis and economics. This would likely add a dimension to the recommendations—often missing in the past—that would make them more feasible and thus more likely to be implemented. Having communications expertise would help NVAC develop and communicate its recommendations more effectively. Without additional resources to hire more staff, however, the trade-offs associated with increasing expertise in these areas would need to be considered.

Strategies for NVAC

Proactively seek input regarding priority vaccine and immunization issues for HHS through regular meetings with the ASH. NVAC should play an active role in ensuring regular and substantive communication between itself and the ASH. NVAC should work with NVPO to seek meetings with the ASH to discuss priorities and strategic directions. Having this type of input from the ASH will help NVAC select topics and formulate recommendations that are of particular interest to the department and thus are more likely to be implemented.

Craft recommendations that are more specific in terms of what actions are needed, who should take them, and over what time period. NVAC could increase the effectiveness of its recommendations by crafting them in a way that is more useful. In many cases, its recommendations are very general and do not state specifically what should be done or by whom. Without such specifics, it is less likely that any organization will take ownership of the recommendation and work to implement it.

Think strategically about how to reach intended audiences. The audience for NVAC recommendations extends well beyond HHS to include, among others, state and local immunization programs, health plans, health care providers, and policymakers. Effectively reaching this audience requires a number of different communication strategies. First, to make reports and recommendations more accessible, NVAC should consider being more selective in making its recommendations. That is, it should focus on a small number of high-priority recommendations and clearly communicate the value of their implementation, both overall and relative to other policy options. This will help make a compelling case that the benefit of implementation is worth the cost. Second, NVAC needs to expand its dissemination efforts beyond just reports and journal articles. The committee should think about innovative ways it could use new media (e.g., wikis), press coverage, presentations at professional meetings, and public forums to disseminate key messages and recommendations. In addition, NVAC should consider identifying and fostering “champions” within stakeholder groups to promote uptake of NVAC recommendations.

Monitor the status of its recommendations on a regular basis. Maintaining a comprehensive list of recommendations with information on the status of implementation would help NVAC to target its follow-through and dissemination efforts. For instance, if a recommendation has not been implemented, NVAC could think about how better to communicate the value of implementation to the parties involved. To be useful, the list of recommendations and their status should be updated on an annual basis. To inform this update, NVAC should seek input from the ASH on recommendations that have been transmitted. The input should include information on which recommendations are being pursued and what actions are being taken.

Concluding Thoughts

Although it has not been fully realized to date, NVAC has the potential to have a significant impact on vaccine and immunization policy and practice. Achieving this potential would be facilitated by a renewed commitment by the ASH, NVPO, and NVAC to work together to identify high-priority issues, develop innovative solutions, and actively foster implementation. Even in the absence of changes within HHS, we have identified actions that NVAC can take internally to maximize its effectiveness given the environment in which it operates. To date, it seems that much of the discussion surrounding the limited effectiveness of NVAC has focused on the organization of HHS—specifically, the fact that the ASH does not have budgetary or line authority over the relevant agencies. While this may indeed hinder the effectiveness of NVAC, changes in the organizational structure of HHS are not likely to occur anytime soon. As a result, NVAC needs to broaden the discussion and think about changes it can make to work more effectively within the current structure.

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