Alcohol Problems among Emergency Department Patients

Proceedings of a Research Conference on Identification and Intervention

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Editors

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Disclaimer

The recommendations presented in this publication were generated during a meeting of diverse public and private organizations and agencies. They do not necessarily represent the official policy or opinions of the Centers for Disease Control and Prevention or the Department of Health and Human Services. Rather, they represent the priorities identified by an expert group convened by this agency.

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Table of Contents

Foreword *i*
Thomas F. Babor, PhD, MPH

Foreword *iii*
Daniel A. Pollock, MD

Introduction *1*
Steering Committee *4*
Speakers *5*
Participants *6*

Recommendations for Alcohol Screening and Intervention in the Emergency Department *9*

Conference Proceedings *15*
Introduction *16*
Daniel W. Hungerford, DrPH

Session 1. The Spectrum of Alcohol Problems and the Scope of Emergency Medicine Practice *21*
Presentation — Ronald F. Maio, DO, MS *21*
Respondents — Jeffrey W. Runge, MD *32*
David C. Lewis, MD *37*
General Discussion *42*

Session 2. Identifying ED Patients with Alcohol Problems: Research Findings and Prospects *51*
Presentation — Robert H. Woolard, MD *51*
Respondents — Cheryl J. Cherpitel, DrPH *68*
Richard L. Brown, MD *75*
General Discussion *80*

Session 3. Intervening with Alcohol Problems in Emergency Settings *89*
Presentation — Carlo C. DiClemente, PhD *89*
Respondents — Gail D'Onofrio, MD *108*
Kristen L. Barry, PhD *113*
General Discussion *119*

Session 4. Implementing Preventive Interventions in Emergency Medicine: Strategic Considerations *133*
Presentation — Larry M. Gentilello, MD *133*
Respondents — Stephen M. Hargarten, MD, MPH *152*
Linda C. Degutis, DrPH *155*
General Discussion *163*

Discussion of Draft Recommendations *171*

Foreword

Alcohol screening and early intervention in medical settings has been a rapidly growing area of public health research with enormous implications for clinical practice. Indeed, for many years we have heard that the best way to "broaden the base" of treatment for alcohol problems is to expand these emerging clinical preventive services into the primary care setting. But as the contents of this publication suggest, this emphasis may have been misdirected, if not misplaced, to the extent that only cursory attention has been devoted to what is perhaps the most important and neglected setting for case finding and risk identification: the emergency department (ED).

Although no volume can recapture the sense of excitement that pervaded the audience as these papers were being presented at the March 19–21, 2001, conference, the impressive array of scholarship, thoughtfulness, and common sense in these written proceedings certainly captures the spirit of the meeting. Literary scholars use the word *epiphany* to describe a sudden revelation of the inner essence of a situation or experience. It was clear to the people who attended the conference that a series of epiphanies took place at the meeting. One realization was the absurdity of treating patient after patient, time after time, in hospital after hospital when both patients and practitioners know that the presenting problems, usually accidents and injuries, are caused by alcohol intoxication, a condition that is almost universally ignored in the interests of expediency. It is not that the people who operate the emergency medical system are uncaring or misinformed. Rather, an institutional inertia seems to have prevented those responsible for health care policy from taking the initiative to design a better system, one that would devote as many resources to managing the patient's drinking as it does to treating the medical consequences of alcohol intoxication. The contents of this volume argue forcefully that while more research may be needed, enough is known at present to warrant a change in policies and procedures about alcohol.

Another epiphany was the realization that the prototypical skid row alcoholic is no longer the major or even the most visible problem drinker encountered by emergency department staff. Risky drinking (i.e., drinking to intoxication), which is the prime culprit in most

alcohol-related accidents, injuries, and overdoses, is much more typical of college students and suburban twenty-somethings, in part because these heavy drinkers—who are not considered alcoholics— are much more numerous in the general population than are chronic alcoholics.

A third epiphany was that applied research on alcohol screening and behavioral interventions, guided by careful conceptualization and sound methodology, can make a difference in creating a knowledge base to change health policy. Insurance reimbursement, legal obstacles, and time constraints are all important reasons why drinking behavior is not addressed in ED settings. But once the elements of a solution are shown to be both feasible and scientifically compelling, the transfer of this knowledge to clinical practice can no longer be postponed, ignored, or opposed.

This conference and its proceedings may be viewed above all as an attempt to develop a sense of coherence, relevance, and direction for a great variety of groups facing an extraordinary diversity of alcohol problems. Far from being a quixotically ambitious undertaking, considering the long-standing tendency to avoid constructive action on alcohol, the ED specialists, alcohol researchers, and research policy-makers who participated in the conference left it with a renewed sense of direction about what should be done.

With the enormous increase in epidemiologic evidence and intervention research, the time is right for a new approach to alcohol problems—one that puts resources, technologies, and expertise where they can do the greatest good for the greatest number of people. To those who were at the conference, who participated, presented, listened, discussed, argued, agreed, and questioned, the contents of this volume will faithfully represent the epiphanies they experienced. To those who were not there, this publication will provide an equally rewarding set of revelations that speak forcefully to the critical issues facing the patients, providers, and researchers whose lives intersect all too often in the unfortunate context of the emergency department.

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Foreword

Emergency physicians and their clinical and research colleagues are well aware of alcohol's role in the injuries and illnesses that lead to millions of emergency department (ED) visits each year. Even though clinicians working in EDs do not identify or report alcohol's role consistently or completely, they treat ED patients with alcohol problems often enough to recognize the pervasiveness and perniciousness of hazardous drinking. Further, many clinical and epidemiologic studies confirm the magnitude and seriousness of alcohol problems among ED patients.

Spurred in large part by the enormous toll taken by hazardous alcohol use and by mounting interest in delivering clinical preventive services during acute care episodes, screening and intervention for alcohol problems in the ED has gained new visibility and importance. The March 19–21, 2001, meeting on this topic, organized and convened by six federal agencies, provided a national forum for practitioners, researchers, and other stakeholders to share findings and perspectives, take stock of current knowledge, and identify research priorities.

As can be seen from the presentations and discussions at the meeting, the need for an in-depth assessment and exchange of information about screening and intervention for alcohol problems extends across fields and disciplines. Many emergency physicians, trauma surgeons, and other front-line practitioners are seeking evidence-based recommendations and practical guidance about ways to systematically identify and reduce hazardous alcohol use among their patients. Alcohol researchers working in this field seek to disseminate their findings to practitioners and collaborate with them on new investigations. Public health professionals seeking to reduce the societal burden of alcohol problems recognize that strengthening the knowledge base for clinical preventive services can yield benefits for the general population as well as individual patients. Policymakers and payers recognize the potential value of preventive care, but they seek evidence for cost effectiveness before making health insurance coverage decisions.

The March 19–21, 2001, meeting was the first national conference devoted exclusively to research on clinical preventive services for alcohol problems among ED patients. The knowledge, commitment, and collaborative spirit of the speakers, discussants, and participants

combined to produce important insights and a valuable set of research recommendations. These are gratifying contributions. But what will make the effort truly worthwhile is using the meeting and proceedings as catalysts for new research and services that reduce the effects of hazardous alcohol use on patients and society.

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Introduction

For two-and-one-half days in March 2001, emergency physicians, trauma surgeons, policymakers, psychologists, psychiatrists, epidemiologists, and alcohol researchers gathered to share information and perspectives on screening methods and interventions for emergency department (ED) patients with alcohol problems. After considering the current state of knowledge in the field, their goal was to design a research agenda that would improve our ability to identify and help these patients.

For years, anecdotal reports from ED staff indicated that many patients had alcohol problems, and during the 1990s, systematic screening studies validated those reports.[1,2] In 1990, the Institute of Medicine issued a landmark report recommending that patients in EDs and other medical settings be screened for a broad spectrum of alcohol-related problems and that screen-positive patients receive a brief intervention or a referral to specialized treatment.[3] As the decade progressed, further evidence from controlled studies confirmed the efficacy of brief interventions for alcohol problems in primary care settings.[4,5] The demonstrated efficacy of these interventions combined with their brief nature led to calls for emergency physicians to address alcohol problems among their own patients.[6–11] Although increased interest led to ED-based research, early efforts were beset by the unique operational difficulties presented by the ED clinical setting.[12] Increased interest was tempered by emergency physicians' preference for treating acute conditions rather than underlying risk factors and the lack of controlled research on interventions in ED settings.

Recognition of these circumstances led staff from the Centers for Disease Control and Prevention (CDC) to invite other federal agencies to support a national effort to summarize the current state of knowledge and consider important directions for research on screening and interventions for ED patients with alcohol problems. Five other agencies joined CDC to co-sponsor this conference: the Agency for Healthcare Research and Quality, the Health Care Financing Administration (now the Centers for Medicare and Medicaid Services), the National Highway Traffic Safety Administration, National Institute on Alcohol Abuse and Alcoholism of the National Institutes of Health, and the Center for

Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration. A steering committee composed of agency representatives as well as emergency medicine, trauma surgery, and alcohol researchers was formed to plan the conference.

Since research in this clinical setting was relatively new and included representatives from disciplines that do not normally collaborate, the committee structured the conference to allow ample time for both presentations and discussion. The committee commissioned presentations on four broad topics: 1) the role of emergency medicine in identifying and treating patients with alcohol problems; 2) screening ED patients for alcohol problems; 3) intervention strategies for ED patients with alcohol problems; and 4) strategic considerations for implementing preventive interventions in the ED. During the first two days of the conference, participants heard the commissioned presentations and responses from invited discussants and joined in discussions to evaluate what is known and to identify critical gaps in systematic research. On the last half day of the conference, the assembled group responded to draft research recommendations presented by the steering committee. After the conference concluded, CDC staff incorporated feedback from discussions into a revised set of research recommendations for steering committee input and approval.

The research recommendations, the text of the formal presentations, and the proceedings of the conference comprise the contents of this report. For the busy reader, the final research recommendations can serve as an executive summary of conference results. The four presentations, each accompanied by two respondents and a comprehensive summary of lively discussions, provide an introduction to the field of alcohol problems and the ED as a clinical setting. Conference participants represented a wide range of disciplines and perspectives. This variety combined with the ample time allotted for discussion generated an enthusiastic and rich exchange of experience and ideas. It is the hope that this report conveys that intellectual vigor and that funding agencies, researchers, and policymakers will carefully consider the research recommendations, which are designed to improve the quality of care ED patients receive for alcohol problems.

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Recommendations for Alcohol Screening and Intervention in the Emergency Department

Conference participants were given draft recommendations for review and discussion. The final recommendations that follow, approved by the Steering Committee, incorporate feedback from that discussion. The order in which these recommendations are presented does not imply level of priority or importance.

- **Research on screening and intervention should address the full spectrum of alcohol-related problems—from risky drinking to alcohol abuse and dependence—among ED patients.**

Alcohol-related problems occur across a continuum of severity—from social censure, injuries, or legal problems associated with episodic, excessive drinking to the more severe psychological, social, and medical conditions associated with alcohol dependence. Screening can identify patients with alcohol-related problems at various points along this spectrum. Intervention programs can also be designed to help patients wherever their problems lie on the spectrum and can vary from brief, on-site counseling provided by non-specialists to referral to intensive, off-site specialist care. The prevailing practice in EDs is to treat the presenting medical conditions of patients with obvious and severe alcohol-related problems, often without directly addressing the underlying cause. This emphasis tends to overlook individuals whose problems may be less severe but more amenable to intervention. Although it is reasonable for individual research studies to address particular segments of the severity spectrum or particular modes of service delivery, the portfolio of research in EDs should cover the full spectrum of care for alcohol-related problems—from preventive services for excessive drinking and associated injury risks to treatment for alcoholism and resulting complications.

- **Research on alcohol-related problems in other clinical settings has produced effective interventions. Future research should capitalize on this work by developing, implementing, and evaluating ED-based intervention studies.**

Interventions for patients with alcohol-related problems have been successful in a variety of clinical settings. Many ED patients should also respond favorably to such interventions. However, few interventions have been studied in ED settings. Research that adapts lessons learned in other clinical settings for use in the ED environment is a top research priority and should include cost-effectiveness studies. In operational terms, this means developing and implementing protocols in the ED that take appropriate elements from other clinical settings and enabling the unique characteristics of the ED and its patient populations to influence the design and development of new methods. In particular, protocols must address issues of large patient volumes, indifference or resistance from ED staff, and financial and time constraints. As feasible ED-based protocols are developed, evaluated, and refined, individual-setting and multi-center trials that evaluate efficacy and effectiveness will become the next research priority.

- **Future research on screening methods should evaluate the operational practicality of screening instruments in the context of protocols that provide interventions and referrals for alcohol treatment.**

To date, ED-based research on screening instruments has focused on performance characteristics. However, screening instruments with high marks for sensitivity and specificity will not be used if they are time-consuming, expensive, unacceptable to patients, or difficult to use. In addition, studies have evaluated screening instruments in isolation from their intended use as the first step in a sequence that provides on-site interventions or referrals to patients with alcohol problems. Although acceptable levels of sensitivity and specificity remain important, future research should address feasibility issues in real-world settings. Which instrument is most acceptable to ED patients? To ED staff? Which instrument will enable the largest number of patients to be screened? Which instrument best helps the practitioner explain screening results and provide counseling? How long does it take to train practitioners to use screening instruments reliably? Which instruments can be easily integrated into protocols that provide on-site counseling? Which ones are best for protocols that only refer patients to off-site intervention

services? To the extent possible, future research on screening should not be divorced from efforts to provide interventions for patients with alcohol problems.

- **Programs that screen for and help patients with alcohol problems collect sensitive, patient-identifiable data. Research is needed to determine what effects public and private sector policies have on the confidentiality of these data and on program operations.**

Programs collect and share sensitive, patient-identifiable data for important clinical, research, and administrative purposes. Practitioners need to share data with other practitioners to ensure treatment during the current visit and in the future. Researchers need data to evaluate possible causal associations and devise effective interventions. Administrators need to share data to process payment for treatment. However, if practitioners and patients suspect that data will be misused, they will resist projects that collect it, placing projects that address alcohol problems in jeopardy. Also, laws in many states allow insurance companies to withhold payment for medical services provided to patients with alcohol-related trauma. In the private sector, many insurance policies prohibit or severely restrict payment for alcohol treatment. When public and private sector policies and practices do not fund services to identify and help patients with alcohol problems, physicians and administrators resist introducing those services. Research is needed to catalogue and evaluate public and private sector policies and practices that influence sharing of data and affect the viability of programs that screen and help patients with alcohol problems.

- **Research is needed to determine how cultural and demographic factors affect patients' access to services for alcohol-related problems, delivery of those services in EDs, and patient outcomes.**

Studies of access to care for a wide range of health services indicate that patient factors such as age, gender, ethnicity, and language, as well as structural factors like how care is organized and who provides it are key determinants of who receives services and of patient outcomes. Some factors have been shown to facilitate access and others to impede it.

Similar lines of research are needed to improve our understanding of how best to deliver alcohol interventions in the ED. For example, studies are needed to help target interventions to different groups of at-risk patients and to identify which practitioners (e.g., physicians, nurses, social workers, prevention specialists) and practitioner characteristics (e.g., attitudes, training, work load) foster the best outcomes.

- **Research is needed on practice behavior, clinical guidelines, and policy changes required to implement, institutionalize, and maintain screening and interventions for alcohol problems in EDs inside and outside of academic medical settings.**

Private and public funds have supported individual research groups to demonstrate the efficacy and effectiveness of screening and interventions for alcohol problems in clinical settings other than the ED. Funding should be provided to implement similar research in EDs. However, knowledge that alcohol problems can be treated successfully in EDs is not sufficient to induce individual practitioners and institutions to change standards of practice. Therefore, future research should clarify how changes in clinical practice can be established and maintained at the individual practitioner and institutional levels. To assure broad applicability, implementation, acceptance, and institutionalization, this research should be designed and conducted in partnership with stakeholders outside academic medical settings.

- **Research is needed to explore and evaluate the role of information and communication technology in facilitating screening, intervention, and referral for alcohol treatment among ED patients.**

Most ED patients have time during their visit to be screened for alcohol problems and to receive an intervention. However, practitioners and administrators resist providing new services because ED staff have little time for additional duties, and ED budgets are too constrained to hire more staff. Technologies such as televisions, video and compact disc players, personal digital assistants, and computers with touch screens might provide new ways to overcome this mismatch between resources and problems. Because devices based on computer technology can handle complex algorithms easily, they could make it possible to tailor services to patients' age, gender, reading ability, problem severity,

and readiness to change their behavior. However, research is needed to develop their potential for screening, counseling, and referring ED patients with alcohol problems and to evaluate whether they are efficient and cost-effective. If ED patients are willing to use these technologies to address a range of problems, they could make preventive clinical services in the ED more acceptable to staff and administrators. If communications and information technologies demonstrate their value for addressing alcohol problems in the ED, they can be adapted and evaluated for use with other preventive clinical services. The potential to provide multiple services that improve patient care and decrease long-term costs could make it easier to find funding and justify research and start-up costs for new preventive services.

- **Funding agencies should increase support for research in screening and interventions for alcohol problems among ED patients and take steps to involve more ED physicians and nurses in research.**

The preceding seven research recommendations endorse a research agenda that will require substantial funding. Nonetheless, increased funding is justified because alcohol problems are so common in EDs that they consume an inordinate amount of ED resources. By addressing this pervasive risk factor, opportunistic interventions in EDs could simultaneously help untreated patients, prevent future alcohol-related harm, and decrease health system costs. Increased funding for research on alcohol interventions in EDs should also improve the quality of research in the larger fields of alcohol research and clinical preventive services research, particularly in the emergency care setting. At present, however, it is difficult to develop and evaluate protocols under real-world conditions because few emergency medicine researchers are involved. The field is so new that they are not aware of funding opportunities, procedures, and agencies. To address this situation, funding agencies need to actively recruit researchers from the field of emergency medicine and make mechanisms of research support better known to potential emergency medicine applicants. This effort should include communications focused on the funds currently available. In the long run, it should involve increased funding to address the research recommendations described previously.

Conference Proceedings

Introduction
Session 1
Session 2
Session 3
Session 4
Draft Recommendations

Introduction

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For as long as emergency medicine has existed, emergency physicians and nurses have encountered and helped patients with alcohol problems. However, because most alcohol problems are occult and screening is not routine, emergency department (ED) patients who have alcohol problems are not generally identified, offered on-site interventions, or referred to assistance outside the ED. Empirical research on the best ways to identify ED patients who have alcohol problems and the best ways to help them is a relatively new endeavor. Consequently, the primary goal of this conference is to identify research topics that need further study in order to improve interventions for ED patients with alcohol problems. A set of recommendations from prominent experts in the field should benefit organizations and individuals who design, fund, and implement such research. The conference and the recommendations will be an initial step toward a shared understanding of the kinds of research needed to improve interventions and increase the chance they will be broadly implemented.

When practitioners contemplate using a new intervention, one of the first things they consider is whether research has demonstrated its efficacy. However, given prevailing conditions in EDs and the health care climate in the United States, they are unlikely to adapt new interventions on the basis of efficacy studies alone. Julius Richmond and Milton Kotelchuck developed a conceptual model[1] that enhances our understanding of how research, public policy, and individual practice patterns interconnect (Figure 1). In this model, three factors—*knowledge base*, *social strategy*, and *political will*—interact to influence public policy. For the purposes of this conference, *knowledge base*, at its most basic level, represents accumulated, empirical evidence about which interventions for alcohol problems are efficacious and which ones are not. In addition to an understanding of efficacy at the clinical level, this knowledge base includes the social, economic, and health care delivery factors that influence alcohol problems and their treatment. *Social strategy* is a set of established goals and a plan for transforming the knowledge base into policies and practical programs that address alcohol problems efficiently and effectively in non-research settings. *Political will* is a measure of

institutional support for those policies and programs. Because official public policy represents the broadest expression of political will, influential constituencies try to shape political will and, hence, official public policy.

From the perspective of physicians, research seems more directly associated with the knowledge base than with social strategy or political will. Naturally, a knowledge base exists primarily as the result of research activities. However, when research is expensive, a knowledge base will not emerge until the political will to support it is gathered. Even when a well-developed knowledge base does exist, it does not automatically translate into well-designed policies and efficient, broadly implemented programs that retain the efficacy of interventions performed in research settings. Translating the knowledge base into a social strategy for fostering widespread implementation of new services typically requires additional research. The Richmond-Kotelchuck model illustrates the interconnection of these three factors—their mutual influence on one another as well as on health policy. Although research is not an explicit component of the model, it is essential to the development and integration of all three of the factors that influence health policy. The goal of this conference is to consider the most important research needed in all three domains of the Richmond-Kotelchuck model. The presentations and discussions will attempt to identify the research topics required to improve the knowledge base, define better social strategies, and increase political will.

The Richmond-Kotelchuck model clarifies the broad categories of research that are necessary to improve the practice of emergency medicine in caring for patients with alcohol problems. Another conceptual model introduced by Holder, Flay, and colleagues[2] characterizes the different phases of research as the focus changes from understanding etiology to evaluating potential interventions to implementing proven interventions. By categorizing research into five phases along a continuum—foundational, developmental, efficacy, effectiveness, and diffusion—this model facilitates the task of summarizing the current state of the knowledge base for specific interventions, evaluating the level of scientific support for them, and identifying gaps in the literature.

For any particular disease, foundational research determines incidence or prevalence, identifies risk factors, and hypothesizes working causal

models of the disease process. This process provides a working understanding from which to develop and test preventive measures or treatments. During the developmental phase of research, pilot or feasibility studies of interventions are implemented to evaluate outcomes, safety, or cost. During the efficacy phase of research, the central question becomes whether, under optimal conditions, the intervention can reduce, cure, or prevent the disease. Efficacy studies go to great lengths to ensure that patients receive uniform, high-quality treatment and that study conditions maximize patient compliance. They are ordinarily randomized controlled trials, so any improvement in patient outcomes can be attributed to the intervention. During the effectiveness phase of research, the fundamental research question shifts to how variations in implementation and acceptance influence patient outcomes. In medical settings outside academic institutions, interventions are implemented differently in response to different patient populations, different implementation staff, and different operational conditions related to the clinical setting. How much does variation in these factors influence intervention success? Diffusion research focuses on effectiveness as interventions become broadly disseminated as well as acceptance of interventions by practitioners and institutions who implement them. Although the phases of research model appears linear, research often proceeds at multiple levels simultaneously, particularly when research results are being translated from one clinical setting to another. Two types of research activities tend to occur in all phases: 1) developing and testing methods and 2) refining causal models and redefining the condition of interest.

Together the two models are useful heuristics for identifying research issues a field must address in order to move forward and for placing those issues in a broader public health context. They also help us evaluate whether the scientific evidence for particular interventions and political and professional environments bode well for widespread dissemination.

Research on alcohol problems has a long history as a field. However, research on alcohol problems among ED patients began relatively recently. During this conference, these conflicting realities will emerge repeatedly. Can screening and intervention methods proven efficacious in other medical and non-medical clinical settings be easily imported for use in EDs? This question must be addressed persuasively. If research is

to be translated into new practice patterns in EDs, those changes will require support from emergency nurses and physicians. They will not be convinced by successful research in primary care or community health settings. They will want to see successes with ED patient populations and in the unique clinical circumstances experienced in emergency medicine. Studies will have to succeed in the context of the realities of ordinary EDs.

For the next three days, four sets of presentations will address the operational realities of the ED, the various ways patients with alcohol problems present to the ED, and the current state of our knowledge base about screening methods and interventions for ED patients with alcohol problems. After the presentations, we will discuss which research projects provide the most important opportunities to improve the practice of emergency medicine for patients with alcohol problems and increase acceptance of those practices.

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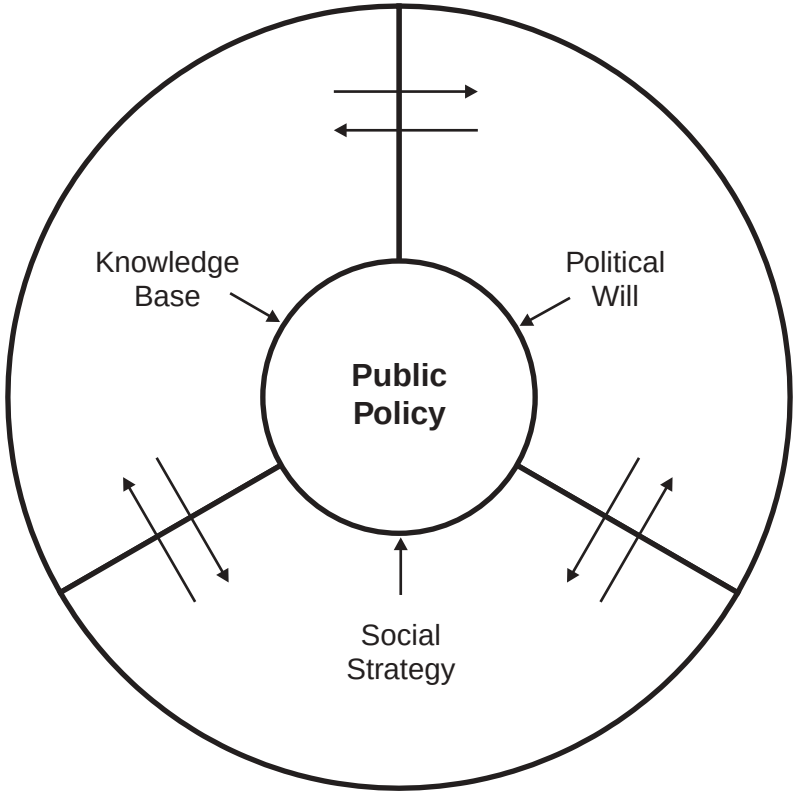
Figure 1.
The Development of Public Policy: Three-Part Health Policy Model



Source: Richmond and Kotelchuck, 1983, p.386.

Session 1.
The Spectrum of Alcohol Problems and the Scope of Emergency Medicine Practice

Ronald F. Maio, DO, MS*
Rebecca E. Cunningham, MD

The economic cost of alcohol problems in the United States is staggering, amounting to $184.6 billion in 1998.[1] These costs include the acute and long-term physical effects of alcohol use. Although no area of medicine is immune from addressing the effects of alcohol misuse, emergency medicine physicians are in the unique position of seeing the full spectrum of the acute and chronic health problems associated with alcohol use. Some of these problems arise secondary to acute alcohol use, such as injury, while others may present acutely but are secondary to underlying disease from chronic alcohol use, such as hepatic failure secondary to cirrhosis.

The Centers for Disease Control and Prevention has convened this meeting to discuss the role that the emergency department (ED) might play in identifying problem drinking and intervening. An integral part of this meeting is the commission of several papers to address the issue. This paper will serve as a broad overview of the range of alcohol problems seen in the ED and the scope of emergency medicine in addressing these problems. It will "set the stage" for subsequent papers by answering the following questions: What are alcohol problems? How do patients with alcohol problems present to the ED? How do ED physicians and staff handle these patients? What are the implications for future research?

What are alcohol problems?

In the Institute of Medicine's *Broadening the Base of Treatment for Alcohol Problems*, alcohol problems are defined broadly and simply as those problems that may arise in individuals around their use of alcohol.[2] "Use of alcohol" specifically refers to the pattern of alcohol consumption: how much, and how often. Alcohol use or consumption is often defined as the number of standard drinks, over a certain period

* Presenter

of time. It ranges from no use, or abstinence, to heavy use. As consumption increases, so does the risk for problems. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) at the National Institutes of Health has set guidelines for determining the levels of consumption at which drinkers are at increased risk to develop alcohol-related problems: for men, on average, that level is no more than two drinks per day or no more than four drinks per occasion; for women, on average, no more than one drink per day or no more than three drinks per occasion.[3] Drinkers who exceed this recommended level of consumption are considered to be engaging in "risky" drinking or are "at-risk drinkers."

Alcohol problems are adverse consequences of drinking and can be defined in three different dimensions: type, severity, and duration. The type of problem can be physical, such as coma from alcohol intoxication; emotional, such as depression or anxiety disorder; or social, such as being late to work because of a previous night of being sick due to excessive drinking. Just as alcohol consumption varies from none to heavy, alcohol problems fall along a spectrum from none to severe—ranging from problems that cause temporary discomfort, such as nausea and vomiting following excessive consumption of alcohol, to those that can be life-threatening, such as severe multi-system trauma that is experienced by an intoxicated driver involved in a motor vehicle crash.

Alcohol problems can also vary in duration: acute, such as the 21-year-old who becomes intoxicated during her first experience with alcohol; intermittent, such as the individual who goes on a binging episode during the holidays; and chronic, such as the business executive who drinks a fifth of scotch a day and has recurrent pancreatitis.

Chronic excessive alcohol use can also result in dependence or alcoholism. This diagnosis is made by considering both the specific manner of alcohol use and the specific types of consequences that the person is experiencing.

Individuals who develop alcohol problems usually go through a sequence, starting with alcohol use, followed by risky drinking, then experiencing alcohol-related problems and for some, alcohol dependence. This progression, however, does not always occur in a linear progressive fashion.[4] It is possible for an individual to have a serious consequence from his or her first use of alcohol. Furthermore, it is

possible for some alcohol-related problems, such as pancreatitis or cirrhosis, to persist even if an individual stops drinking. Because of the strong relationship between the level of alcohol consumption and alcohol problems, risky drinking is considered by many to be a "problem" itself, or more precisely, a problem in regard to pattern of alcohol use. Thus, patients with alcohol problems include both those who drink at risky levels and do not experience adverse consequences and those who drink at risky levels and do experience adverse consequences of risky alcohol use, including dependence.

How do patients with alcohol problems present to the ED?
Individuals with alcohol problems may present to the ED for medical problems directly related to their alcohol use or for medical complaints that have nothing to do with their alcohol use. Furthermore, some patients present in a manner that makes their alcohol problems readily apparent, while others may present in a manner that does not suggest alcohol problems. The following cases illustrate these points.

John is a 25-year-old automobile mechanic who usually drinks one or two beers a day during the week, but on the weekends he goes through three or four six-packs of beer. He may present to the ED in one of several ways.

Case #1:
Chief complaint alcohol-related
Patient with obvious alcohol problem

After drinking all night with his friends, John drives off the road and into a tree.

ED Presentation: Saturday 2 a.m.: 25-year-old driver in a motor vehicle crash; open fractured femur; altered mental status; alcohol smell on breath; open, empty beer cans found in car by paramedics. Blood pressure 90/50 and pulse 140.

Case #2:
Chief complaint alcohol-related
Patient with not-so-obvious alcohol problem

Very early Sunday morning, after drinking all night and still intoxicated, John and his friends decide to play flag football on a dark, muddy field. John takes numerous tumbles. On Sunday afternoon he wakes up to find his ankle swollen and painful. He ices and elevates it with some relief. He goes to work on Monday and has a very difficult time because of pain. He finishes the workday but is so uncomfortable he decides to go to the emergency department.

ED presentation: Monday 6 p.m.: 25-year-old male, chief complaint of ankle pain; twisted ankle while playing flag football over the weekend.

Case #3:
Chief complaint not alcohol-related

On Wednesday, John develops ear pain. The pain persists, and he develops a low-grade fever. His primary care doctor has no appointments available until next week; he suggests John go to the ED.

ED presentation: Friday 11 a.m.: 25-year-old male, chief complaint of right ear pain and low-grade fever.

How do emergency medicine physicians and staff handle alcohol problems?

How a patient's acute or chronic alcohol use influences what the ED physician does for the patient is related to the nature of the complaint (injury or non-injury), its severity, and the disposition of the patient. Following are examples of how ED physicians would address the alcohol problems of the hypothetical patient presented in the previously described case scenarios.

In Case #1, John's drinking is clearly evident to anyone taking care of him. While alcohol intoxication might indeed be one factor responsible for his altered mental status, his condition indicates significant injury, which could very likely include traumatic brain injury. Whether or not John has been drinking, or the nature of his routine use of alcohol, has little effect on his immediate evaluation and treatment. If John had not been drinking, and his medical presentation was exactly the same, his evaluation and treatment would remain the same. Unfortunately, a substantial number of emergency physicians and trauma surgeons would not even consider how obtaining a blood alcohol concentration (BAC) could facilitate addressing a patient's problematic alcohol use in the recovery and rehabilitation phase.[4–6] In fact, the American College of Surgeons Committee on Trauma has recently removed laboratory testing for alcohol and drug use as essential testing for the trauma patient.[7] Furthermore, most ED physicians and trauma surgeons would not consider asking John any questions to determine how he was using alcohol.[4–6]

If John's injuries after the crash were not so obviously severe, how would his alcohol use affect what is done for him in the ED? Let's assume that everything about John's crash and presentation is the same except that his vital signs are normal, he has no clinical signs of fracture, and he is only slightly disoriented. The initial impression of the ED physician is that there is a very low likelihood that John will have to be admitted to the hospital. However, the ED physician may elect to get a BAC to gain some insight into John's altered level of consciousness. If the BAC is substantially elevated, alcohol may help explain this disorientation. Yet, even if the BAC is elevated, it would not preclude a concomitant brain injury. If John's BAC is elevated, the ED physician and nursing staff would want to make sure that siderails are up on gurneys to prevent falling and that the patient is assisted in going to the bathroom, lab,

or X-ray. Furthermore, the ED physician would want to insure that John is not discharged from the ED until he is completely sober or can be assisted and observed at home by friends and family. Unfortunately, the overwhelming odds are that no one in the ED will address John's drinking behavior. As few as 15% of ED patients with obvious alcohol problems ever have their drinking behavior addressed while in the ED or through an ED referral for problem drinking.[4,5]

For the patient in Case #2, the ED physician would do a focused history and physical exam. It is very unlikely that any questions would be asked about risky health behaviors such as drinking or smoking. The patient's acute use of alcohol at the time of injury or his regular use of alcohol will play no role in how the ED physician evaluates and treats the patient for a sprain or fracture. Furthermore, it is very unlikely that the patient would volunteer information that he was intoxicated when the injury occurred. Even if the information was volunteered, based on previously cited ED studies,[4,5] it is very unlikely that the ED physician would address the patient's use of alcohol.

In Case #3, the ED physician would do a focused history and physical exam. In this presentation also, it is very unlikely that the ED physician would solicit any information about John's use of alcohol. It is also very unlikely that John would ever say anything about his alcohol use because it is unrelated to the problem for which he came to the ED. Furthermore, it is extremely unlikely that the ED physician would address John's drinking behavior even if it was revealed during the patient encounter.

These case scenarios illustrate that the clinical imperative of the emergency medicine physician is "treat 'em and street 'em." The main mission is to deal with the patient's chief complaint. No emergency physician would ever question the appropriateness of addressing the patient's alcohol consumption or alcohol problems if they were immediately relevant to the evaluation, treatment, and disposition of the patient. But the focus is on treatment of the chief complaint, not long-term modification of health behaviors or disease or injury prevention.

Emergency medicine's first concern for the patient is whether or not there is an immediate threat to life. If the patient is not breathing or has no pulse, whether the patient has recently ingested alcohol or has an alcohol problem will have essentially no effect on the manner of intervention the ED physician chooses. Once immediate threats to life are ruled out or treated, the ED physician next wants to obtain information

that is relevant to the evaluation, treatment, and disposition of the patient. What is important to the ED physician about the patient's alcohol use is how it may influence these three activities. The initial concern is the acute alcohol use status of the patient. This is particularly relevant for patient and staff safety issues. Furthermore, extensive testing may be required because of inability to obtain an appropriate history or because acute alcohol effects mimic other pathology. Finally, disposition may be affected by the patient's inability to drive safely, or even walk, because of intoxication.

There are additional reasons for ED physicians' not addressing a patient's alcohol problem in depth. One reason is ignorance. When many ED physicians hear the words "alcohol problems" they think "alcoholic": the disheveled, homeless, intoxicated patient. They are not aware of the spectrum of alcohol use and its associated problems. They are also not aware that a substantial percentage of their patients may be using alcohol in a risky fashion, even if those patients present with problems that are not obviously alcohol related. Furthermore, many ED physicians are not aware of research that shows that brief interventions for drinkers with alcohol problems can be effective and can be delivered in the acute care setting.[8]

Another reason the ED physician does not address a patient's alcohol problem in depth is attitude. Many think that alcoholism or heavy drinking is not something to be treated, but something to be overcome by the patient, or that the ED is not an appropriate place to conduct interventions.[9] Lack of time and lack of support are also important issues. Even ED physicians who support interventions to change drinking behaviors among ED patients do not think they or the staff has the time or expertise to deal with alcohol problems.[9] Furthermore, they often wonder, "Who is going to pay for this?" Thus, in general, the ED physician is concerned with addressing the consequences of the patient's alcohol problem, but not the alcohol use that leads to the problem.

However, action is being taken that may eventually help to change ED physicians' perspectives and attitudes. Academic leaders, through the Society of Academic Emergency Medicine and clinical leaders in the American College of Emergency Physicians (ACEP) have urged ED physicians to integrate a public health approach into their practice, which includes addressing patients' use of alcohol.[9–15]

Many ED patients do not have access to primary care physicians for prevention, and many primary care providers do not provide preventive services. Furthermore, the ED visit is now seen as a teachable moment during which preventive services may be particularly effective.[9–10] Also, ACEP has already published policies on primary injury prevention, alcohol abuse and motor vehicle safety, and substance abuse education.[13–15]

Implications for future research

The purpose of this conference is to consider the role of the ED in identifying patients currently experiencing or at risk for alcohol-related problems and in delivering appropriate interventions. Subsequent presentations in the conference will address the issues of screening, intervention, and implementation, and the research issues that surround these topics. We must answer these questions: What types of patients do we want to identify? How do we identify them? Which interventions are effective in the ED? Who will deliver these interventions? Who will pay for these interventions? Are these interventions cost-effective compared with interventions in other venues? What will it take to implement effective screening and intervention strategies nationwide? We must also address knowledge-based deficiencies or attitudes, which may be obstacles to widespread implementation of efficacious research, and explore strategies such as resident training and post-graduate education to overcome these obstacles.

The research agenda that results from this conference must acknowledge the logistic realities of the ED. If an intervention targets a substantial proportion of ED patients, such as patients who exceed the NIAAA guidelines for drinking, then that intervention should be compatible with the physical realities of the way emergency medicine is currently practiced. It seems unreasonable, given today's extremely busy ED staff, to anticipate that current staff alone can screen and intervene for a problem that affects 20% or more of patients without a substantial increase in resources.[16,17]

Regardless of the specific issues that need to be addressed, any research agenda that is developed must be based on an integrative approach. We must remember that the ED does not operate in a vacuum (Figure 1). Our colleagues in surgery, internal medicine, adolescent medicine, and

psychiatry also have to treat patients with a wide range of alcohol problems. Perhaps joining forces with them may be one way to overcome logistic difficulties. It also must be noted that it is not just those in the health care arena who have to address alcohol problems, but also social service workers, workplace supervisors, and law enforcement personnel. The ED is the 24/7 interface with the hospital and the community and is there as a safety net when other community resources fail. Strategies need to be developed so that the ED can work with the community to optimize interventions for alcohol problems.

Alcohol problems are not only an ED problem, but also a major societal problem. Emergency medicine has a major role to play in society's response to that problem.

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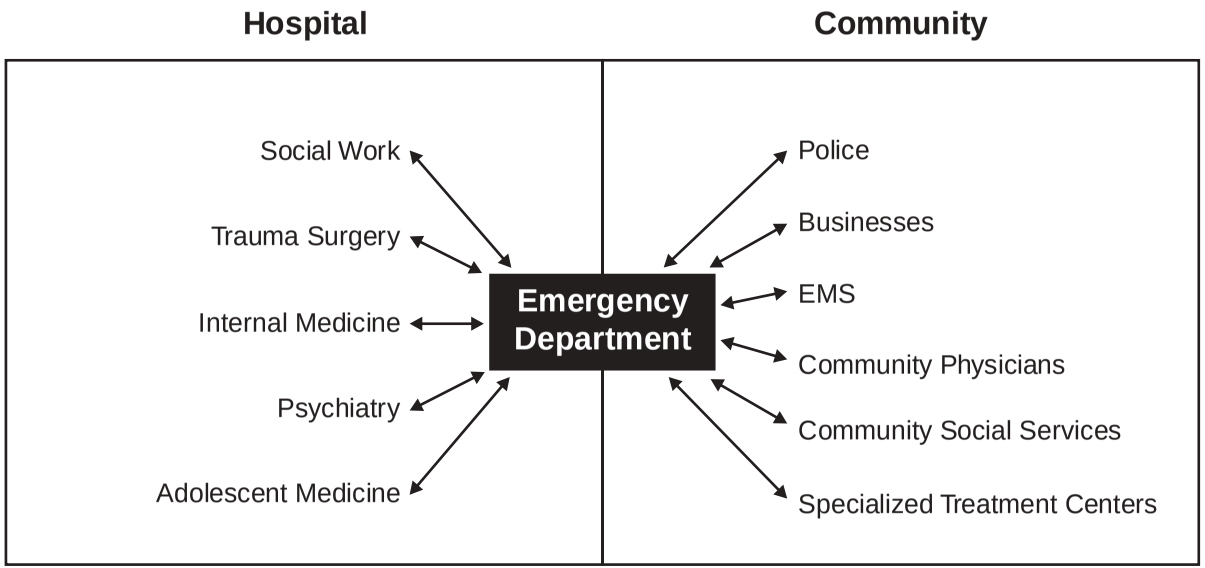
Figure 1.
Alcohol Problems and the Emergency Department:
A Collaborative Approach



Screening and Intervention for Alcohol Problems in the Emergency Department: Ideal Versus Reality

Jeffrey W. Runge, MD

As part of this introductory session, it will be helpful if we are all "on the same page," regardless of our backgrounds. The audience is composed of people from emergency medicine, the psychological and psychiatric communities, the treatment community, and the regulatory agencies. We all have different perspectives on the issue. That we have to hold a meeting on screening and intervention in the emergency department in the first place suggests a problem. If screening and intervention are such good ideas, why isn't everyone doing them?

Treating alcohol-use problems has obvious public health and societal benefits. Successful treatment of alcohol abuse and dependency is well recognized to be beneficial not only for the individuals who have the disease, but also for virtually everyone in their families, at their workplaces, and on the road. Why should emergency medicine physicians be involved in screening and intervention for alcohol problems? Because it is good for patients, it is good for society, and physicians have a moral imperative to treat disease.

Emergency physicians are frequently the only doctors some people will ever see. We see patients at their worst, usually with illnesses or injuries that denote obvious risk factors for further illness or injury, and those factors should be addressed. We do the same for other disease. We would never consider sending anyone with stable angina out of the emergency department if they had blood pressure or diabetes that was out of control. We would never send a child out of the emergency department with an intentional injury without a full investigation of the social risk factors. Yet, it is commonplace to discharge people with stable pancreatitis, alcoholic gastritis, and motor vehicle trauma without attention to the underlying risk factor of alcohol abuse or dependency.

Numerous studies have been published over the last 15 years documenting that injured drivers impaired by alcohol are not charged or convicted for driving while impaired. A brief review of the literature

reveals at least 14 studies conducted since the mid-1980s with prosecution rates between 0% and 30%, and usually only around half of those are convicted of driving while intoxicated. While most of those studies were conducted on admitted patients in trauma centers, the study by Runge et al.[1] looked at ED patients, regardless of admission or discharge. We found that in this group, only 28% of drivers were charged with DWI and 17% were convicted, even though the average blood alcohol concentration in this population was more than 0.20 g/dl. Many physicians, therefore, have become complacent about directing attention towards alcohol problems of drivers, since law enforcement and society at large do not choose to act.

Other tactics have been advocated to intercede with these individuals. In a study by Runge et al.,[2] 2,787 patients who were seen in the ED following a motor vehicle crash were screened for alcohol use problems using the TWEAK screening instrument. Of them, nearly 14% screened positive for high risk of alcohol abuse or alcohol dependency. These patients were randomized 1:1 to receive either a brief intervention in the emergency department or only a follow-up phone call in three and six months. Of those who received the intervention, 28% agreed to further evaluation for alcohol use problems, and 72% refused. Of those who agreed to an evaluation, 49% actually received follow-up by alcohol treatment professionals, a follow-up rate 20 times that of controls or those who refused evaluation. Although long-term follow-up data from this group is not available, this study does show that screening patients for alcohol use disorders and using a brief intervention for those at risk resulted in a follow-up rate much higher than the current U.S. standard of practice.

The American College of Emergency Physicians, the Emergency Nurses Association, and the National Highway Traffic Safety Administration are currently preparing a set of recommended practices for physicians, nurses, and paramedics with respect to alcohol use disorders. Although these are not yet published and available for dissemination, screening and intervention are recommended as part of standard practice to detect patients with alcohol use disorders. (Editor's note: These recommendations are now available online at http://www.nhtsa.dot.gov/people/injury/alcohol/EmergCare/index.htm.)

If screening and intervention are effective, why are they not part of the standard of care for emergency medicine, emergency nursing, or other

specialities that deal with high-risk patients? The reality is that each patient intervention, whether it is looking in an ear or performing a spinal tap, requires time. Time is the currency that determines whether patients are generally satisfied with their ED visit. Patient satisfaction surveys from across the country uniformly show that time spent waiting for treatment and overall time spent in the ED are directly related to patients' perceptions of quality of service. This affects marketability, morale of the physicians and staff, and the economic survivability of EDs. Remuneration for physicians and hospitals is based on the "level of service" provided to each patient and on patient volume. Any time spent on interventions that are not reimbursable, do not increase the level of service, or do not reduce patient flow negatively affects the economics of the emergency department. Currently, there is no procedure billing code that is reimbursable for screening and intervention in the ED, in spite of the patient's need for it or its obvious advantages.

There are other barriers to the performance of screening and intervention. Many physicians have encountered insurance companies that refuse to reimburse for services required because of injury that occurs while the patient is under the influence of alcohol. Therefore, there has been a disincentive to even collect blood alcohol levels or to mention alcohol intoxication on the medical record. Many emergency departments in this country have no referral destination for a patient who screens positive, irrespective of the patient's willingness to enter into evaluation or treatment.

An informal survey of physicians indicates that there is relatively little confidence in the "cure" for alcohol use disorders among the patient population seen in the ED. This may be due in part to the perception that those who require treatment are limited to the "street drunk" or the incorrigible patient with long-standing disease who frequents the ED. Many physicians do not understand that many patients who are sober and otherwise motivated to be healthy also have treatable alcohol problems.

Emergency departments in many hospitals were not constructed with patient privacy in mind. Often, only a curtain separates gurneys, if that, making it difficult to have a conversation with a patient that would make screening and intervention feasible in such a setting.

Another problem is physicians' overall lack of familiarity with screening tools and how to perform a brief intervention in the ED, because it is not part of standard medical curricula. Physicians have questioned whether some common screening tools are overly sensitive for use in the ED and constitute an unnecessary intrusion for patients. For example, the alcohol intake questions recommended by the National Institute on Alcohol Abuse and Alcoholism may be overly sensitive and not very specific for a problem that requires treatment, and the lifetime consumption history that one gets with the CAGE test results in too many positive screens. Many physicians are also troubled by screening that is used on patients who do not have physical sequelae of alcohol problems or may present with an unrelated problem, such as a sprained ankle, and the appropriateness of entering into a discussion about alcohol use in that setting.

There are other imperatives that consume the day of an emergency physician, such as taking good care of the other three patients per hour who are in the waiting room, spending inordinate amounts of time on the phone with consultants, solving administrative problems, and the myriad of interruptions that occur minute-to-minute during a shift in the emergency department. Therefore, adding another imperative may not be well accepted.

In summary, screening and intervention in the emergency department will probably never be part of the standard practice until:

- The process is made streamlined and efficient;
- It is recognized as part of the provision of good care and is consequently reimbursed by insurers;
- Screening intervention tools that are sensitive, specific, and brief become part of the standard medical curriculum; and
- The existing societal and economic disincentives are removed for seeking out this illness for potential treatment.

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A Commentary on Substance Abuse Screening and Intervention in the Emergency Department

David C. Lewis, MD

My compliments to Ronald Maio on an outstanding presentation about which I have no disagreement. Yes, the teachable moment is a real asset in the emergency department, where crisis makes the patient more attentive and less grasping of denial.

I want to reflect on the presentations of Drs. Maio and Runge by looking at some of the structural issues that influence screening and intervention in the emergency department. But first, I propose a motto for this conference: "Make screening (and intervention, if indicated) for alcohol problems in emergency departments a vital sign." In other words, screening should be routine, not performed only when problems are suspected.

Two fundamental medical facts bear on this issue. First, drinking problems present themselves in many ways and can masquerade as other surgical and medical problems. Therefore, it is commonplace to miss the drinking diagnosis and to treat the complications. How can we tolerate a medical practice that focuses on treating complications when the treatable underlying condition goes undiagnosed and untreated? That we do raises fundamental medical, public health, ethical, and legal issues.

The second medical fact germane to this discussion is the importance of drug interactions in emergency assessment and care. Clearly, ethanol interacts in important ways with prescription, over-the-counter, and illegal drugs. I believe that you can justify taking a routine drinking history to assess the role of ethanol/drug interactions in the emergency care setting.

Turning now to the structural issues that influence emergency screening and intervention practice, I use two illustrations. Figure 1 is modified from the National Academy of Sciences, Institute of Medicine report *Broadening the Base of Treatment for Alcohol Problems*.[1] That report not only emphasizes the heterogeneity of alcohol problems, but also sets forth a public health model of screening and intervention in many settings, including prisons, workplaces, schools, and health care

settings. The study also recommends a social and professional support structure that, if implemented, would make emergency department screening and intervention less unique and conceptually easier.

Figure 2 illustrates the ways in which training, expectations, and the environment interact to influence health outcomes. Each component is important. For effective care, we must take into account the social context in which training occurs; the personal perspective that medical students, residents, and attending physicians bring to the clinical task; the role models we empower as mentors and teachers; and the acquisition and application of essential knowledge and skills.

As for more support from the surrounding medical culture, I think that we should fundamentally change primary care practice, a setting that should facilitate alcohol screening and intervention. I think we have been much too patient with the performance of the primary care system. It is very frustrating for those of us who have worked in medical education to see the low screening rates for alcohol problems persist year after year. More than 100 articles document need for and barriers to addressing these problems in the context of routine medical care. Primary care practices should routinely screen and intervene for alcohol problems rather than screen at the current rate of 20% to 30%.

And how do we change the system? One problem we have is that we focus too much on barriers, and not enough on incentives. There are efforts that seek to focus on incentives that I believe will be of interest to this conference. One is a project by a group called Physician Leadership on National Drug Policy.[2] Called "Project Vital Sign," it seeks to lay the groundwork for a national clinical demonstration on screening and intervention in clinical practices. While not limited to alcohol problems, the goal of this demonstration is a major expansion in the screening, diagnosis, intervention, and referral of individuals with alcohol, tobacco, and other drug problems. The strategy is for states to collaborate with health care organizations to design and implement the proposed national demonstration. A key informant study is underway, which will include several participants from this conference.

Another initiative is sponsored by Join Together, a national communication and networking resource for communities. Called "Demand Treatment," this project, located initially in 16 cities, engages community activists and a diverse group of professionals in order to build consumer demand for substance abuse treatments.[3] Some of the

"Demand Treatment" sites have concentrated on emergency department screening and intervention. (Editor's note: The website was launched in April 2001 and can be accessed at http://www.alcoholscreening.org. It had about 20,000 visits in its first three months.) This use of electronic technology is another example of educating the public in a way that should facilitate addressing alcohol problems in the ED. These projects are examples of initiatives that will improve the context in which increased attention to alcohol problems in emergency department settings can occur.

Finally, in developing the research agenda, it is important to identify factors that facilitate or impede translating research into practice in the emergency department and to study the incremental costs for screening and intervention—particularly the intervention and referral process in emergency departments.

References

1. Committee for the Study of Treatment and Rehabilitation Services for Alcoholism and Alcohol Abuse, Institute of Medicine, Division of Mental Health and Behavioral Medicine, National Academy of Sciences. *Broadening the Base of Treatment for Alcohol Problems*. Washington (DC): National Academy Press; 1990.

2. Physician's Leadership on National Drug Policy (PLNDP). Available from: URL: http://caas.caas.biomed.brown.edu/plndp.

3. Join Together Online. Available from: URL: http://www.jointogether.org/home.

Figure 1.
Assessment and Treatment of Substance Abuse in Primary Care Settings

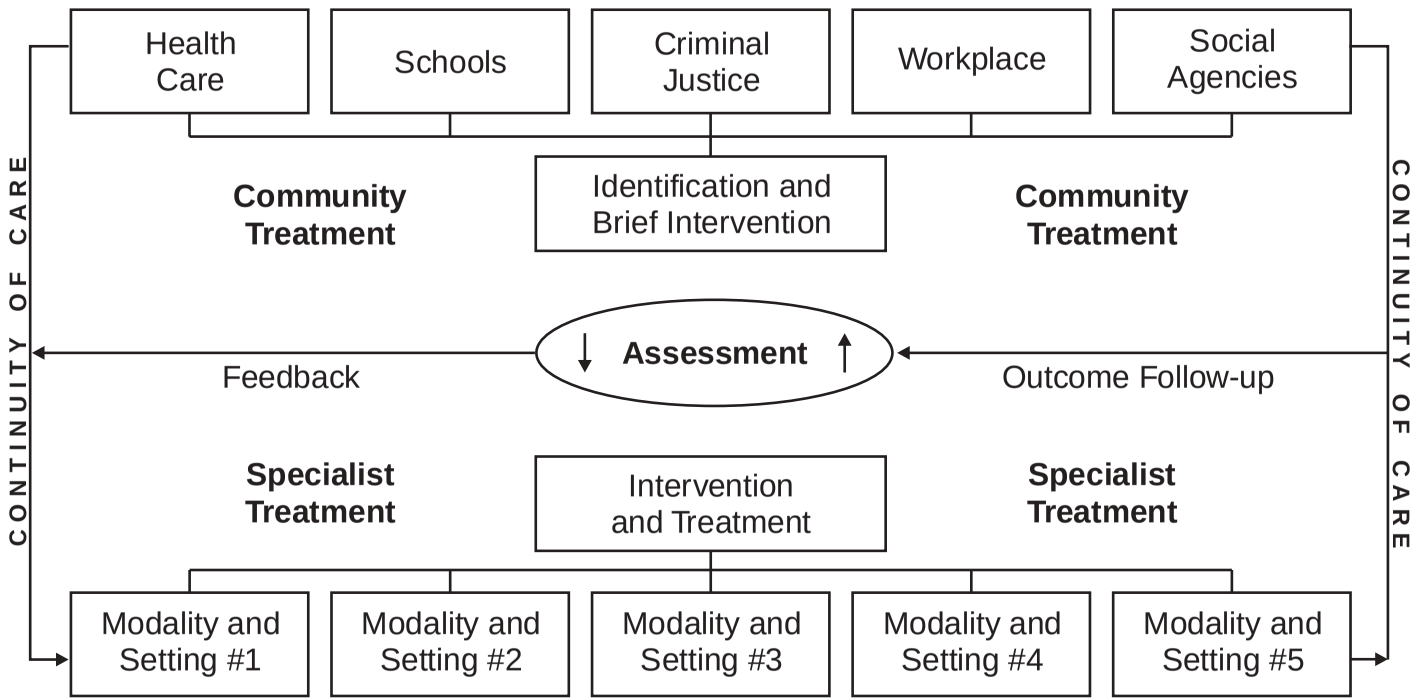
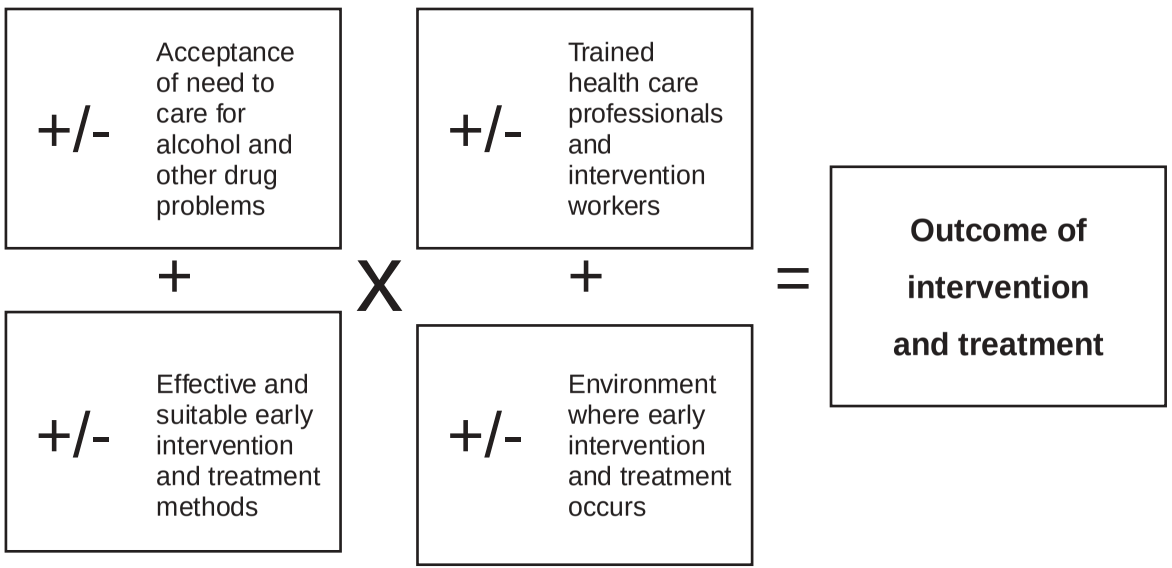


Figure 2.
Equation for Effective Health and Medical Care



General Discussion

David Lewis started the discussion by noting that additional training for medical staff on screening and interventions for alcohol problems is not adequate to change the stigma and attitudes that shape practitioners' interactions with patients. However, since the evidence of intervention efficacy has grown more compelling, training can influence "the surrounding professional culture [that] will affect what is supported and financed."

Daniel Pollock noted that the presentations covered five general areas: the spectrum of alcohol problems; the schematic diagram and concepts that emerged from the IOM report, *Broadening the Base of Treatment for Alcohol Problems*; the scope of emergency medicine practice; the way alcohol-related problems are recognized or overlooked in the ED; and obstacles to changing emergency medicine practice.

John Moulden asked how interventions the conference speakers agree are efficacious could be more broadly implemented "given that the major physician organizations are not supportive of recommendations to make them standard."

Lewis pointed out the risk of having physicians who could benefit financially be the major proponents for change. He maintained that changes can occur more readily if support also comes from other interested parties such as the business community.

Jeffrey Runge noted that the National Highway Traffic Safety Administration collaborated with the American College of Surgeons and the American College of Emergency Physicians "to develop a set of normative statements for emergency nurses, emergency physicians, trauma surgeons, and paramedics that assert that screening and intervention are part of the ED's roles." He noted, however, that most acute care physicians still believed that alcohol treatment is "futile care."

This led to a discussion of the mission of EDs and the role of emergency physicians in providing care for patients with alcohol-related problems.

David Fiellin speculated that a systems-wide approach was required.

Ronald Maio agreed because the alcohol problems of injured patients admitted to the hospital are often overlooked by both ED and trauma staff.

Pollock asked whether Fiellin was referring to a system of preventive care or a broader system that would encompass multiple specialities and settings.

Fiellin replied that he envisioned certain tasks being assigned to specific individuals who have roles in the ED to make sure that the important aspects of the quality of care are conducted, so that responsibilities are clear.

Richard Ries noted that most of the people who take vital signs, in any medical setting, are not doctors, but support staff. Therefore, issues of training and responsibility become very important.

Peter Rostenberg agreed that defining roles and who fills them was an important element in assuring that services are actually delivered. He also raised the issue of how medical staff could cooperate with legal and law enforcement personnel to access alcohol-related medical information without compromising their traditional role of focusing on the patient's needs.

Thomas Babor noted that both primary care and emergency physicians have similar problems with respect to time limitations, perceived competency of practitioners, and the effectiveness of interventions for alcohol problems. The issue is not so much the efficacy of interventions for alcohol problems as getting health care systems to respond to identified need. He noted that several models have emerged. The traditional model integrates screening and intervention into the normal routine of the health care team. However, that approach has come up against managed care and reduction in resources, creating problems when physicians are expected to do everything in the same amount of time with patients. A second model transfers responsibility to a specialist such as a nurse practitioner, trained health educator, or hired worker. A third model incorporates screening for types of problems and risk factors likely to fit a health care setting's population. For instance, in emergency

medicine, screens include seat belt use and risky driving. A fourth model utilizes technology, such as handheld computers. He concluded that different models make adoption more likely.

Pollock noted that planned follow-up does not occur in the emergency setting. He questioned whether this is a barrier to performing these preventive services.

Babor replied that little follow-up occurs in other medical settings as well. The central question is: Will the encounter bring about a lifetime change in drinking behavior? Probably not. Will it produce a reduction in drinking in some patients? Yes.

Lewis hoped that alcohol problems would not be considered a behavioral problem and therefore not be addressed in general medical settings.

Phillip Brewer commented that despite the large burden placed on medical systems by alcohol problems, medical schools provide little training on alcohol and substance abuse.

Runge replied that if data show interventions are effective, that will encourage institutions to implement services.

Brewer responded that patients are already asked screening questions about organ donation and a living will, but he wondered why they are not asked more obvious and immediate questions.

Bruce Becker said the issue was not lack of time, but how the time is used. For example, his ED has advocates on call around the clock to facilitate consultation for patients who are victims of domestic violence or violence against women. The screening rate for these problems was very low before the advocates became available. Becker noted that something can be accomplished even with a two-minute encounter with a physician in the ED. Brief, smoking interventions in the primary care setting can increase spontaneous quit rates from 1% to almost 5%.

Edward Bernstein commented that interest in ED-based screening is escalating because journal articles are being published on the topic. Even though emergency physicians work in acute care, they must address chronic problems. Patients with alcohol or drug problems will

return multiple times, much like asthmatic patients. McLellan's *JAMA* article on dependent drinkers showed that alcohol interventions have better outcome rates than interventions for chronic diseases.[1] An intervention in which the doctor listens to and respects the patient is key. A social policy, the public health perspective, and resources are missing, he said. Resources include training, protocols, and additional personnel.

Larry Gentilello doubted ED physicians could be convinced that their role is to screen patients for alcohol problems. He suggested handing the responsibility to people who think that interventions are worthwhile and are trained to do them. There are two studies on alcohol interventions in EDs, he said, and both of them used a collaborative care approach in which physicians set the stage, and then trained staff performed the interventions. There have been two decades of research into how to integrate psycho-social services into primary care medicine, and that research uses a collaborative care model. Every ED should have staff available for a brief intervention, and he wondered why they did not.

Maio responded that the work load can be increased by the way we define "alcohol problems." We might be able to intervene with problem drinkers with current hospital resources. However, if we want to help patients who drink more than NIAAA recommendations, then in most EDs, we will have to deal with 30% to 45% of all patients. To whom should those people be referred? Many patients in EDs do not have primary care physicians, so there is no guarantee that their issues will be addressed. Maio agreed that the intervention should not be the responsibility of the emergency physician. He described a study using handheld computers, which are not bulky or intrusive, and suggested that such technologies could facilitate broader implementation.

Susan Rook asked whether a uniform and accepted definition of a "cure" is available. She also wondered whether it would be helpful to develop a partnership with the recovery community so that ED personnel can learn from former patients whether their interventions had an impact.

Runge reiterated that most physicians do not believe alcoholism can be cured. In the case of hypertension, for instance, medicine can successfully treat a patient. However, positive outcomes from interventions for

alcohol problems have not been stressed. He agreed that there is a potential role for the recovery community in the effort to increase awareness in the ED.

Richard Brown appreciated the focus on incentives to increase screening. He noted that doctors want to provide quality care and want a sense that their work improves patient outcomes. Another incentive might be that interventions for alcohol problems could lower costs. Like asthmatics who smoke and heart failure patients who do not take their medications, patients with alcohol problems who return to the ED often cause frustration. However, if they are treated like patients with other chronic disease, doctors can see results. While ED physicians might not deliver the interventions themselves, they must align behind the programs.

Richard Longabaugh added that in a study at his university, substance abuse specialists decreased the negative consequences of alcohol consumption of sub-critically injured patients, and two-thirds of them returned for a second appointment 7 to 10 days later. They used a motivational-enhancement intervention because the teachable moment in the ED alone was not sufficient.

Linda Degutis said there is time to do the screening, especially with the help of nurses or technicians. She described a project in which physicians screened ED patients with minor injuries for alcohol problems. One physician ensured that screening occurred 70% of the time, but the average screening rates were 40%. With increases in patient loads, no increase in physician staff, and decreases in nursing and social work staff, she doubted that the hospital would agree to fund new staff to conduct interventions and screens. She added that personal bias was one barrier to screening that had not been addressed.

Robert Woolard returned to the topic of scope of practice. Patients might be ready for an intervention but associate this type of intervention with their primary care doctor. They might be ready, but the institution might not be ready to let it happen in an ED. For example, he designed a study that involved a saliva test. Even though the patient's record would be confidential, the legal and ethics committees of the hospital were not supportive.

Peter Monti suggested that the "cure" model could be broadened to include the idea of "harm reduction." In his work with younger adults, he found strong harm reduction effects after a brief intervention for alcohol problems. This might not be a cure for abuse, but the intervention did reduce risk-taking behavior.

Ries reminded the group that if an institution has a professionally certified drug or alcohol treatment service, that service may fall under confidentiality rules that make interdisciplinary research involving the ED difficult to undertake.

Ann Mahoney noted that records for the emergency room visit do not normally fall under 42 C.F.R. Part 2, the regulation that covers the confidentiality of alcohol and drug abuse patient records. However, they may if the patient receives treatment from a specialized drug or alcohol unit or staff whose primary function is to provide drug or alcohol services. Because the rules are complicated, she suggested consulting the regulations, which can be found at http://www.treatment.org.

Gordon Smith supported the concept of using the ED visit as a teachable moment, but the concept is difficult to find in the literature. He suggested that the teachable moment might not always apply to the ED visit. For example, mothers with injured children might not be as receptive to a preventive intervention during an ED visit as during a primary care visit.

Gail D'Onofrio noted that the current emergency medicine curriculum does not address screening and brief intervention for alcohol problems. At Yale, training for residents led to improved performance and attitudes about role models and resources. She concluded that change would start with the training of residents and faculty members.

Becker described an unpublished study about the teachable moment conducted at Brown that showed there was no relationship between the chief complaint of the patient and his or her ability to retain either general or specific information except in motor vehicle crashes. Patients' ability to retain information was related to their degree of stress and their perceived degree of illness.

Runge noted that the concept of teachable moment applies to institutions as well, and that there is literature on the topic in community mental health.

Fred Blow commented that there is a social role of the ED in caring for the most disadvantaged in society. For a variety of groups, the ED is the only access point in health care. He urged the conference to contextualize the role of preventive services in the only place that many people get health care. In those terms, alcohol screening and interventions become imperative.

Carl Soderstrom noted that studies indicate about 50% of medical schools have some alcohol education. He often surveys residents informally during his lectures to assess whether they are familiar with alcohol intervention and screening tools. Most have heard of the CAGE and indicate they learned about it in medical school. He did not know of any good studies or surveys on this topic in the area of emergency medicine.

Charles Bombardier noted that the existence of a teachable moment results not just from the context in which the patient is involved, but also from the dynamic between the patient and the practitioner. How a care provider interacts with a patient can generate either resistance or openness to talking about alcohol problems. To a large degree, the clinician is responsible for creating a teachable moment.

Runge noted that the first moment that a person or a family member arrives at the ED is not generally a teachable moment. Once the stress is alleviated, then patient education can occur.

Guohua Li added that the mismatch between the patients and the physicians can be an important barrier to successful interventions. For instance, at Johns Hopkins, 85% of the patients are African Americans, and there is only one African American attending physician. This is not so much an issue of race as a problem for interventions that rely on patient-physician communication, compounded by the age of physicians in training. Another barrier to acceptance is interdisciplinary conflict. While alcohol poses a health threat, the American Heart

Association maintains that moderate alcohol use has cardiovascular benefits. Patients can be confused by these messages in the media. He concluded that there is much to do even within the medical health community.

Reference

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