

# Environmental scans

## How useful are they for primary care research?

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*[T]he focus shifts the locus of change from the individual to the environment in which the individual resides. Such a shift can provide crucial insight into realistic expectations related to health behaviors and the utilization of health services. By examining environmental or contextual factors, researchers can collect data to guide the design of effective health programs uniquely tailored to the needs of the communities.*

Rowel et al<sup>1</sup>

Environmental scans (ESs) originated in a business context as a tool for retrieving and organizing data for decision making.<sup>2,3</sup> Environmental scans have been mainly used to investigate external factors that are interpreted as keys to success and affect the future of an organization.<sup>4,5</sup> These scans are used to provide decision makers with knowledge about current social, economic, technological, and political contexts, and to identify any potential short- and long-term shifts. Equally important, ESs provide an opportunity for an organization to envision and plan for its future, given these contexts and shifts. The United Way of America engaged in comprehensive scanning to chart its future in the early 1980s.<sup>6,7</sup> Since then, ESs have been growing in use and complexity.

Environmental scans have recently been used by health researchers to address mental health, nutrition, women's health, aboriginal issues, health and housing, and knowledge transfer.<sup>1</sup> A goal of ESs includes the design of health programs that are geared toward and incorporate the needs of specific communities. In all domains, ESs are designed to help plan for the future, to provide evidence about the directions of an organization or profession, to raise awareness of issues, or to initiate a project.<sup>5</sup> Because of the increasing use of ESs in health research, it is important for health care professionals to have some knowledge of what these scans entail in order to critically assess and evaluate their potential impact on health care, and to determine whether or not they might be a useful tool in primary care research and delivery. Environmental scans can also assist health organizations with the development of evidence-based policies.

### Scope of the environment

The main sources of data for an ES include both internal and external sources. An "internal assessment"<sup>5</sup> of a project or an organization can involve memos, personal

communications, minutes of meetings, or other internal documents. The use of these internal documents is one of the advantages of an ES because it does not dismiss the valuable sources of information that exist in day-to-day work. However, an organization (or a professional group) is also affected by external trends, and accounting for these trends is central to an ES. External trends can include the political and social context, economic shifts, and, particularly for public health and medicine, technological change. Data can be derived from corporate sources as well as government or academia.<sup>6,7</sup>

Environmental scans allow the researcher, clinician, or policy maker to account for diverse types of knowledge. These types of knowledge are codified knowledge (data collected from clinical reviews, policy documents, or statistics) and tacit knowledge (data collected from face-to-face meetings or focus groups, or by e-mail or telephone). This distinction is recognized in both the knowledge management and the transfer of literature valuable for research and strategic planning.<sup>8-10</sup>

Environmental scans can involve a range of target populations or subjects; one can scan organizations, work units and services, project dynamics, health services, and communities, such as health professionals or those targeted for health service interventions.<sup>6,11-14</sup> Given the multiple sources of data, varying target populations or subjects, and types of knowledge, it is difficult to provide an overarching framework for ESs, except to say that they usually entail a combination of a literature review (eg, systematic, critical, or exploratory), a short survey, a focus group or interview with key stakeholders, and some form of program planning.

Although the field is still developing, there are several modes of ESs that health organizations can use, relative to the complexity of the environment, the perceived availability of information, and the extent to which the organization is willing to "intrude" on the environment to collect data.<sup>15</sup> Based on previous work by Aguilar<sup>2</sup> and Choo,<sup>15</sup> these modes can be loosely allocated into the following categories:

**Passive approach (ie, collecting existing knowledge).** The passive approach involves "casual and opportunistic"<sup>15</sup> data collection from already established external contacts, or more focused data collection from well-respected existing sources, such as industry databases or published documents.

**Active approach (ie, creating new knowledge).** The active approach involves an organization taking action and analyzing reactions, and creating data-collection tools to obtain “rigorous and objective” data. In both cases, the active approach is accompanied by a willingness to “revise or update existing knowledge.”<sup>15</sup>

## Evaluation

There still lacks a specific measure of effectiveness of scanning, mainly because of the diverse approaches inherent in this activity; many health ESs are descriptive in nature, making health professionals aware of issues.<sup>16,17</sup> An evaluation of any ES will depend upon the particular goals, modes, and methods chosen. For instance, Rowel et al<sup>1</sup> sought to increase cancer screening among African Americans and used their ES to devise interventions. Using both passive and active modes, they found that face-to-face meetings were best for community outreach and that it was important to train volunteers and staff “to be sensitive to ‘manhood’ issues associated with prostate cancer–screening.”<sup>1</sup> In this instance, the ES was considered effective, as it fostered the development of a pilot prostate cancer screening project; the program resulted in 312 men being screened in contrast to 169 men by a similar organization in the area.<sup>1</sup>

## Current application

Some current work by R.T.M includes applying an ES method to mentoring programs for family physicians. The active approach to collecting data is being conducted to determine what types of physician mentorship programs are in place in Canada. The data collection involves a program of formal interviews, which requires a dedicated research assistant, accompanied by informal telephone conversations based on 2 focus questions and a basic review of programs via Internet searches. These informal tools—telephone calls and Internet searches—not only provide support for the formal, academically oriented surveys, but also allow for networking between interested researchers, practitioners, and other leaders and teachers who want to know more about the mentorship model and who might want to apply the model when it is completed.

## Conclusion

Environmental scans are now a recognized and valuable tool in health decision making. The ES method—particularly if it’s designed in consultation with an information specialist or librarian—provides evidence for policy and decision making, and program planning. The diversity of sources and types of data gathered in ESs have resulted in effective planning and program implementation in various sectors. As a tool to systematize knowledge, ESs can guide health organizations and projects, leading to evidence-based solutions to health care issues. ❁

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## Competing interests

None declared

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