CURRENT EVALUATION PRACTICES INVOLVING RESOURCE ALLOCATION PROCESSES IN CANADIAN HEALTHCARE ORGANIZATIONS: A SURVEY OF SENIOR MANAGERS

Neale Smith
Craig Mitton
Centre for Clinical Epidemiology & Evaluation
Vancouver, British Columbia, Canada

Cam Donaldson
Glasgow Caledonian University
Glasgow, United Kingdom

Stirling Bryan
Centre for Clinical Epidemiology & Evaluation
Vancouver, British Columbia, Canada

Stuart Peacock
Canadian Centre for Applied Research in Cancer Control, and
School of Population and Public Health, University of British Columbia
Vancouver, British Columbia, Canada

Abstract: Resource allocation is a key function of senior leadership teams within healthcare organizations. Academic support of this function has traditionally focused on constructing tools to make decisions more formalized, and much less attention has been paid to understanding resource allocation as a management process. In particular, evaluation has been a missing aspect. The authors conducted a pan-Canadian survey of senior managers within the healthcare system. This survey included questions related to formal evaluation of their resource allocation processes and outcomes. We use these data to shed some light upon the state of priority-setting practice in Canada at the present time.

Résumé :   Les décisions sur l'allocation des ressources représentent une des principales responsabilités des équipes de direction dans les organisations de services de santé. Les chercheurs ont traditionnellement assisté avec ces responsabilités par l'élaboration d'outils aidant à formaliser les processus qui mènent aux dé-

Corresponding author: Neale Smith, Centre for Clinical Epidemiology & Evaluation, Vancouver Coastal Health Research Institute, University of British Columbia, 7th floor, 828 W 10th Avenue, Vancouver, BC, Canada V5Z1M9; e-mail <neale.smith@ubc.ca>

cisions. Par contre, la conception de l'allocation des ressources comme processus de gestion a reçu significativement moins d'attention, l'évaluation en particulier étant un aspect négligé. Les auteurs ont réalisé une enquête auprès des cadres supérieurs à travers le Canada incluant des questions reliées à l'évaluation formelle de leurs processus d'allocation de ressources et les résultats. Les données obtenues permettent d'examiner les pratiques courantes au Canada en matière d'établissement de priorités.

INTRODUCTION

Resource allocation is a key function of senior leadership teams within healthcare organizations; the task is to assign available resources to a variety of different services and programs. Choices and trade-offs must be made. Consider the following (hypothetical) example of how the senior management of a Regional Health Authority might go about this. The leadership team asks each department head to submit proposals for a 3% budget reduction by reducing services which provide the least value; each department can also submit two proposals for new spending or investment. All proposals are submitted using a standard business case template that lays out the evidence and expected impacts (e.g., number of patients affected, or demonstrated effectiveness of a program when implemented in a similar context). The senior management team assesses each proposal based on a set of weighted criteria, for instance alignment to strategic directions, mandate, expected number of patients to benefit, and effects on staff workload. The money saved from budget reduction proposals is redirected toward the new investments that had the highest scores. The decisions are communicated and (presumably) implemented. So, how would senior managers evaluate this set of management activities?

Historically there has been little attention paid to evaluation of these decision-making processes and their outcomes (Smith, Mitton, Cornelissen, Gibson, & Peacock, 2012). We can see this by looking at the evolution of program budgeting and marginal analysis (PBMA), a widely used healthcare resource allocation model. A recent description of PBMA defines eight stages to the process: determine aim and scope; establish review committee; clarify existing resource mix; set criteria; identify and rank spending or disinvestment options; communicate decisions; review and validate choices; and evaluate (Gibson, Mitton, & DuBois-Wing, 2011). Tellingly, the evaluation phase was absent from earlier iterations of this model (Peacock et al., 2010; Peacock et al., 2006).

The larger literature confirms this gap: "Only a few studies have presented ideas for evaluating the success of priority setting" (Sibbald, Singer, Upshur, & Martin, 2009). Within this small set, different ideas about what constitutes success can be found. The logic model is a common tool used to guide evaluation efforts (McEwan & Bigelow, 1997; McLaughlin & Jordan, 1999); while this is typically done at the program level, it has also been applied to assess health system planning in Canada (Collins, 1999). It might include inputs and activities, outputs, and short- and long-term outcomes, categories we can use to organize pertinent questions and measures for the evaluation of priority-setting and resource allocation practice. Some studies primarily address the process itself. Accountability for Reasonableness, a model that draws attention to ethical issues of fair process, has been employed in several cases (e.g., Gibson, Martin, & Singer, 2004; Martin, Giacomini, & Singer, 2002; Menon, Stafinski, & Martin, 2007). Evaluation can also consider the achievement of outputs like stakeholder satisfaction; some research reports that "success has been gauged by whether managers continue to support the priority-setting approach taken" (Mitton & Donaldson, 2003, p. 337). Culture change—new attitudes toward decision making—has been identified by some as a potential evaluation measure for formal resource allocation and priority-setting (Mitton & Donaldson, 2003; Peacock, 1998; Sabik & Lie, 2008). This is quite similar to what Patton has called process use: more rigorous habits of mind acquired through the act of participating in evaluation itself (Patton, 1997, 2007). A wide range of measures related to performance by health service purchasing organizations has been developed and tracked in the United Kingdom as part of the World Class Commissioning initiative; this was described in part as an effort to reorient attention from means to ends, or outcomes (McCafferty et al., 2012, p. 42). Mitton, Patten, and Donaldson (2004) posit that PBMA could be evaluated by "addressing whether PBMA leads to improved population health" although "such evaluations remain to be done" (pp. 122–123). Finally, a handful of research studies have directly elicited possible evaluation criteria from decision makers themselves (Gibson et al., 2004; Kapiriri & Martin, 2010; Sibbald, Gibson, Singer, Upshur, & Martin, 2010; Sibbald et al., 2009).

The most comprehensive recent effort in the Canadian context to construct a framework for resource allocation evaluation is found in the work of Sibbald and colleagues (2009, 2010). They gathered the views of Canadian and international researchers (via a Delphi process), senior Canadian healthcare decision makers at ministry, health region, and hospital level (through individual interviews),

and health system users (through focus groups). Participants were asked individually and collectively to identify what they saw as key elements of successful priority setting. These were synthesized into a set of 10 features—5 specifically related to process and 5 to outcomes (Sibbald et al., 2009). This framework was elaborated in an evaluation tool that was pilot-tested in one Ontario hospital, and found to be an acceptable and practical approach (Sibbald et al., 2010), though no subsequent uses of the tool have been reported in the published literature.

Most studies of priority-setting and resource allocation in Canada have focused on one or a few individual cases; there is a need for work that captures a larger perspective and can tell us about the state of practice within the healthcare sector as a whole. Therefore, in 2011 the authors conducted a pan-Canadian survey of senior managers within healthcare organizations across all provinces and territories. This survey included some questions related to formal evaluation of their own processes for organization-wide resource allocation (i.e., the decisions made at the senior management table), including an adaptation of Sibbald's work. We can use these data to shed some light on the state of practice at this time. In this article, we thus present descriptive results of the evaluation-related questions from the larger survey, following the model of Robinson, Dickinson, Freeman, Rumbold, and Williams (2012), who report similar descriptive findings from a survey of English primary care trusts on priority-setting structures and processes. Note, however, that because our survey was not primarily about this topic, many interesting questions cannot be addressed here but remain for future study.

Our findings can be characterized as exploratory empirical research into evaluation practice. We also use them to illustrate some of the challenges confronted in subjecting management activity to such scrutiny. A lack of evaluative efforts around priority-setting and resource allocation means that healthcare organizations may be missing many practical areas for improvement. It also means that there may be opportunity for the evaluation community to bring its methods and perspectives to bear on this important issue.

METHODS

Ethics approval was granted from the University of British Columbia Research Ethics Board. The purpose of the online survey was to learn from senior decision makers (i.e., those at the vice-president level)

in regional health authorities (RHAs) or their closest equivalents, in all Canadian provinces and territories, about the organization-wide resource allocation processes practiced by senior management teams. By resource allocation, respondents were specifically asked to think about financial resources (i.e., budgets). A wide range of topics was covered; this article reports on that subset directly focused upon evaluation (see Table 1).

Survey questions were developed collaboratively by the researchers based on review of the literature and existing instruments, and personal experience with priority-setting research in Canadian healthcare organizations. For instance, we asked about willingness to use possible measures of success within an evaluation framework, using a question based on Sibbald et al.'s framework (2009). This framework had five process items, all of which were used in our survey. It also had five outcome items, which we modified in the following way. One item, on stakeholder acceptance and satisfaction, was divided to address internal and external stakeholder audiences separately. Sibbald and colleagues (2009) argued that an outcome of effective priority setting would be enhanced understanding: stakeholders gain "insight into the priority setting (e.g., goals of the process, rationale for priority-setting, and rationale for priority-setting decisions) and/or the organization (e.g. mission, vision, values, and strategic plan)," but we separated this into two items. Finally, we added an item related to the achievement of improved health and well-being. We felt that outcomes of resource allocation could not be fully assessed without looking in some way at impacts on patient or population health, despite the fact that the difficulties of assessing attribution to longer-term outcomes are well known (Mayne, 2001); the absence of this item in Sibbald et al.'s (2009) work has been the subject of some criticism.

We identified 89 organizations and sought to obtain three replies from each management team, for a maximum response of 267. Contacts were categorized into three different roles by the research team: finance, operations, and planning. If more than one executive member was available within any of these categories, the contact was selected randomly. Contact information was gleaned from healthcare organizations' websites. After the instrument was pilot-tested with three senior decision makers and finalized, contacts were invited to participate in the survey by e-mail. This approach included a link that took respondents to the survey (which was hosted on a secure server maintained at the university). Individualized passwords were

Table 1
Evaluation-Related Questions in Survey of Senior Canadian Healthcare Leaders

Focus or topic	Wording of the question	Response options
Primary variable of interest		
Is evaluation of senior management team's (SMT) resource allocation carried out?	We conduct formal evaluation of the process or outcome of resource allocation.	Respondent does or does not check this item.
Factors explored as potential correlates of evaluation activity		
Influence of key organizational characteristics: Budget size Budget trend SMT turnover	What is the size of your organization's annual operating budget? How has your organization's total budget changed over the last three years? Has this organization undergone much change in personnel in senior management in the last three years?	Respondent selects most appropriate response (close-ended question).
Participation in decision making	We presume that organization-wide resource allocation is primarily carried out by your senior management team. Do any of the following stakeholders also participate? [6 items: Board members, middle managers, physician leaders, other clinical staff, patients, and members of the public]	Respondent checks all answers that apply.
Key driver of resource allocation	Please indicate which of the following descriptions you think most closely matches how resources are allocated across major programs or portfolios by the senior management team in your organization. [5 items, collapsed and reported as 3 factors: formal resource allocation processes, political factors, historical budgets]	Respondent checks the one answer that most applies (forced choice).
Perceived fairness	To what extent do you personally agree with the statement: "Our organization-wide resource allocation process is fair"?	Respondent answers on a 1–5 scale, from *strongly disagree* (1) to *strongly agree* (5).
Overall rating	Overall, how would you rate your organization's resource allocation process?	Respondent answers on a 1–5 scale, from *very poor* (1) to *very good* (5).
Possible evaluation measures		
	The following are possible measures for evaluating resource allocation efforts. Indicate which of these, if any, you think could be used as good measures of successful resource allocation processes in your organization. [13 items—see Table 4 below for full details.]	Respondent answers for each item on a 1–5 scale, from *definitely would not use* (1) to *definitely would use* (5).

provided in the e-mail invitation. After approximately three weeks and one reminder, contacts who had not responded were replaced by another management team member, who received a like invitation. This procedure was followed over four waves or until there were no more contact names available to us. The total number of managers contacted was 418. The survey was open over a three-month period (late January to late April 2011). Respondents had the option of replying to the survey in either English or French. Data are presented in the form of frequency distributions.

RESULTS

Ninety-two individual responses to the survey were suitable for analysis. This represents 34% of the maximum intended response of 267 persons—it includes 22% of all 418 senior managers who were ultimately invited to participate across all four survey waves. This response rate is not atypical of e-mail surveys. Participation in the survey was a meaningful commitment of time (approximately 30 minutes on average) by senior healthcare executives. Results will be reported here using the seven focus topics identified in Table 1. There are few ways available to tell if the respondents are representative of all senior healthcare managers in Canada. Respondents indicated if they held a finance, operational, or planning portfolio; their self-reports closely matched the categories to which the research team would have assigned them. We calculated the proportions of each group in the total list of managers: 12% were finance, 41% planning, and 47% operational. Compared to this, our respondent group somewhat overrepresented the finance category and underrepresented planning positions (21% and 28% of completed surveys, respectively). Response rates were greatest in the four western provinces, which may skew the results if managers in the other provinces/territories have systematically different perceptions about how their organizations conduct priority setting and resource allocation. We obtained actual budget information about all organizations; on this basis, the very largest health authorities (those with over $1 billion budgets) are slightly overrepresented among respondents.

Is Evaluation Conducted?

Overall, 21% of respondents (n = 19 of 92) indicated that their organization conducted formal evaluation of its senior leadership team's organization-wide priority-setting efforts—this could be of process

and/or of outcomes, and the term itself was not defined in the survey (see the exact wording in Table 1). These respondents represent 16 (of 60) different organizations represented in the data set. Though process and outcome evaluations are clearly distinct, we did not separate them because we were constrained in the number of questions we could devote to the topic, and because we were interested in the overall level of evaluation activity of any kind. This we would take to represent policy-makers' current receptivity to evaluation. As it is unlikely that the target audience of senior managers would be trained in evaluation or would conduct it themselves, we did not attempt to obtain specific comments about the techniques or methods that would be used.

It is not uncommon in organizational research to find that informants' views differ (Starbuck & Mezias, 1996). Of the organizations for which we had multiple respondents (n = 26 of 60), there was internal consensus in 69% of cases—in 15 cases, all respondents agreed that no formal evaluation existed, and in 3 cases, there was agreement that it did. However, in 31% of cases (n = 8), there was internal disagreement—some members of a management team reported the presence of evaluation while their colleagues did not. In their study of priority-setting among English primary care trusts, Robinson et al. (2012) followed up with respondents to reconcile discrepancies so that they could report findings by organization. We were unable to do so; thus all analyses here are based on individual manager responses, not organizations.[1] This is interesting in that it shows what constitutes knowledge of evaluation may be highly varied. It means that our findings should be considered with exceptional conservatism—it is highly plausible that the actual extent of evaluation effort may be below what these respondents report.

Drivers of the Use of Evaluation in Priority-Setting Processes

Formal evaluation seems more often reported when there exists broader participation in decisions beyond the senior management team itself. We asked about whether or not there was direct participation in resource allocation decisions by six stakeholder groups: board members, middle managers, physician leaders, other clinical staff, patients, and members of the public. Where respondents reported no direct role for external stakeholders, only 1 in 10 said that evaluation of priority-setting/resource allocation was conducted. At the other end of the scale, among those who reported that three or more of the six stakeholder groups played a direct role in their or-

ganization's decision-making, over one third (34%) reported formal evaluation of those processes. See Table 2.

Table 2
Conduct of Evaluation, by Key Process and Outcome Measures (*N* = 92)

		N	*Number (and percentage) of respondents indicating that evaluation was undertaken in their organization*
Number of stakeholder groups participating directly in organization-wide resource allocation (in addition to SMT)	0	10	1 (10%)
	1 or 2	50	7 (14%)
	3 or more	32	11 (34%)
Type of process*	Formal/rational	46	13 (28%)
	Political	22	2 (9%)
	Historical	22	3 (14%)
Process perceived to be fair**	Disagree or neutral	27	3 (11%)
	Agree or strongly agree	61	15 (25%)
Reported overall quality***	Poor or fair	43	5 (12%)
	Good or very good	46	13 (28%)

n* = 90; *n* = 88; *** *n* = 89

Respondents to the survey were also asked which factor they perceived as most shaping senior management choices: formal resource allocation processes, political factors, or historical budgets. Although any resource allocation system might have a mix of all these aspects, respondents were forced to choose which one they felt predominated. Our opening scenario reflects what might be considered a formal process. Conducting evaluation of their own processes seemed more commonly reported among those who emphasized the rational nature of their resource allocation practice—28% of those who said that their organization employed a formal process claimed that formal evaluation activity was also involved, compared to 11% of those who reported that the primary resource allocation driver was either political forces or historical factors (again, see Table 2).

Those respondents who indicated that they conducted evaluation of their own resource allocation processes also tended to give higher scores in their assessment of the fairness of these processes. Perceived fairness was measured on a 5-point scale, from *strongly dis-*

agree (1) to *strongly agree* (5). The average score for that group of informants who reported evaluation was 3.89, compared to 3.54 for those who did not report conduct of evaluation (Table 2). What we sought here was an overall assessment of process fairness; for example, would participating managers from the scenario described in our opening paragraph characterize their efforts as leading on balance to fair allocation? The survey contained several additional questions based on the Accountability for Reasonableness framework, which provided information about the presence or absence of features considered to make resource allocation decisions procedurally fair—relevance, publicity, revision, and enforcement (Gibson et al., 2004). Examples of our questions include "There is a mechanism for resource allocation decisions to be appealed" and "Agreed-upon process rules and decisions are followed through on and enforced." These findings suggest that resource allocation among responding organizations may lack some of the features that would (in one account) define fairness—that is, respondents may say the process is more fair than can be substantiated by looking at processes actually in place. However, the pattern of responses is consistent across all these questions: those who report that their organization conducts evaluation of its resource allocation are also more likely to report having the specific features that we operationally defined as constituting fairness.

Those respondents who indicated that they conducted evaluation of their own resource allocation processes also tended to give higher scores for the overall quality of those processes. Overall rating was measured on a 5-point scale, from *very poor* (1) to *very good* (5). The average score for those who reported evaluation was 3.78, compared to 3.34 for those who did not report conduct of evaluation (see also Table 2). We cannot state that conduct of evaluation should necessarily lead to higher ratings—it might as easily reveal flaws in one's process.

Factors Unrelated to Use of Evaluation

There is no obvious pattern in the data relating to organizational characteristics and the presence or absence of evaluation processes—evaluation activity appears independent of an organization's budget size, budget trend, or senior executive team turnover. Again, this is based on relatively small numbers who reported that their organizations conducted evaluation of senior management's resource allocation efforts. Some evaluation of priority-setting and resource

allocation was reported by respondents from both large as well as small organizations, in both situations of growing and capped resources, and among stable executive teams as well as those undergoing substantial membership changes (see Table 3). The encouraging news is that employing evaluation procedures to support resource allocation does not appear to be limited to the largest organizations; there are opportunities for evaluators wherever in the country they might be.

Table 3
Conduct of Evaluation, by Key Organizational Characteristics (*N* = 92)

		n	*Number (and percentage) of respondents indicating that evaluation was undertaken in their organization*
Budget size	Small: < $500 million	50	10 (20%)
	Medium: $500 million–$1 billion	14	5 (36%)
	Large: > $1 billion	28	4 (14%)
Three-year budget trend*	Decreasing (down by > 2%)	7	0
	Stable (+/– 2%)	18	3 (17%)
	Increasing (up by > 2%)	65	15 (23%)
Executive team turnover	Minimal (25% or less)	35	5 (14%)
	Moderate (up to 50%)	32	8 (25%)
	Major (more than 50%)	25	6 (24%)

*n = 90

Possible Measures of Success

Possible measures of success adapted from Sibbald et al. (2009) were presented to survey participants. If a management team, such as the one described in our opening paragraph, wanted to assess the depicted process and its outcomes, these might be measures (with a basis in the literature) that would allow them to do so. Generally, they refused to rule out any options. All items received majority support (that is, participants stated that they "definitely" or "likely" would use such indicators); this shows wide support for both process- and outcome-oriented evaluation approaches. As a consequence, however, there is limited variation across responses (see Table 4). This may be unsurprising as the question was posed in the hypothetical; given the low overall prevalence of evaluation as reported above, a question asking about current practice likely would have produced similar

Table 4
Possible Measures of Successful Resource Allocation Processes

"The following are possible measures for evaluating resource allocation efforts. Indicate which of these, if any, you think could be used as good measures of successful resource allocation processes in your organization."

	N	% (#) Definitely would use	% (#) Likely would use	% (#) Maybe would use	% (#) Unlikely to, or definitely would not, use*	Mean, out of 4**
PROCESS						
It was clear to all what sources of information were being used in decision making	89	55.1 (49)	37.1 (33)	6.7 (6)	1.1 (1)	3.46
Important internal stakeholders were meaningfully and successfully engaged when decisions are made	89	52.8 (47)	34.8 (31)	9.0 (8)	3.4 (3)	3.37
We had a clear, predefined process, and we stuck with it	89	57.3 (51)	25.8 (23)	11.2 (10)	5.6 (5)	3.35
We gave appropriate consideration to values and context	90	42.2 (38)	41.1 (37)	12.2 (11)	4.4 (4)	3.21
We allowed for decisions to be appealed or revised in light of new information	90	30.0 (27)	42.2 (38)	20.0 (18)	7.8 (7)	2.94
OUTCOMES						
Population and/or patient health outcomes were improved	90	62.2 (56)	28.9 (26)	3.3 (3)	5.6 (5)	3.48
We improved the quality of decisions made	89	60.7 (54)	29.2 (26)	6.7 (6)	3.4 (3)	3.47
We succeeded in shifting resources from lower priority to higher priority areas	90	58.9 (53)	27.8 (25)	8.9 (8)	4.4 (4)	3.41
Participants gained a greater understanding of departments and programs outside of their own	90	41.1 (37)	46.7 (42)	11.1 (10)	1.1 (1)	3.28
Participants came away with a better understanding of the process we use to allocate resources	90	41.1 (37)	45.6 (41)	7.8 (7)	5.6 (5)	3.22
Internal stakeholders demonstrate their acceptance of and satisfaction with the process and results	89	38.2 (34)	40.4 (36)	15.7 (14)	5.6 (5)	3.11
External stakeholders endorse or support the process and results	88	30.7 (27)	37.5 (33)	26.1 (23)	5.7 (5)	2.93
Positive externalities (e.g., good media, peer recognition, etc.) were achieved	90	21.1 (19)	45.6 (41)	26.7 (24)	6.7 (6)	2.81

*Separate response options combined here due to small numbers.
** Scale of 1–4, where 1 = *unlikely to*, or *definitely would not* use, and 4 = *definitely would* use.

lack of variability (with consensus on non-use of most measures). Willingness to use a measure is, of course, not the same as whether or not such a measure is seen as useful or good.

Among process measures, the most support was shown for those that reflect transparency and engagement. Least (though still considerable) interest was shown for the use of an appeals or revision mechanism. Reinforcing this idea, we note that only 26% of all respondents in our survey reported that they currently had a formal appeals process for their organization-wide resource allocation decisions. Among outcome measures, there seems to be most support for the idea that good resource allocation can be judged by its effects on population and patient health. Process use items were also widely endorsed. Least support (though again still considerable) was offered for items that look to impacts outside of the senior leadership team itself; that is, acceptance of the process by other stakeholders within and outside the organization, and the generation of positive externalities such as good media or peer recognition. We speculate that this is because such outcomes are farther from direct control of the management team, although we would need to gather qualitative data to know the reasons behind respondents' ratings.

DISCUSSION AND CONCLUSIONS

Resource allocation and priority-setting can be conceived as an example of a planning cycle, whose generic models often prescribe an evaluation phase (Anderson, 1974; Howlett & Ramesh, 2003). We included some evaluation-related questions in our survey because we believe that evaluation is an important aspect of a good priority-setting and resource allocation process, likely to be a characteristic of high-performing teams and learning organizations. Evaluative information can be integrated into ongoing work activities and infrastructure to support the achievement of strategic goals and objectives (Chunharas, 2006; Torres & Preskill, 2001). So, to what extent are senior management teams, the priority setters in Canadian healthcare organizations, evaluating their own efforts? These data give us a snapshot in time. They say that formal evaluation by Canadian healthcare leaders of their own resource allocation processes is uncommon. Moreover, the disagreement among some members of senior management teams about whether or not they have a formal process suggests that such processes may not be highly visible or well understood among these senior managers More work to explore why evaluation is not occurring, including the collection of rich qualitative

data, would be valuable. A research project centred upon evaluation (as opposed to being incorporating as one component within a larger multidimensional survey, as here) would need to better specify for respondents the activities that constitute an evaluation.

Why might attention to evaluation have been so limited up to the present time? We can speculate that it may be a combination of lack of emphasis within priority-setting models and tools, and a more general lack of an evaluative culture and capacity within healthcare planning and delivery organizations. As well, many senior managers like those in our survey have training in either finance and business, or the health professions, which may expose few of them to knowledge of formal evaluation concepts. Evaluators would want evaluations to be more common and done well, because evaluation can make a unique contribution to the improvement of resource allocation practice. This can include learning and skill development among managers and greater transparency about allocation decisions. Evaluation leading to improvement in how resources are distributed can ultimately help decision-makers better meet the health needs of the communities they are responsible for.

Our survey suggests that evaluation efforts are associated with rational planning, greater participation, greater perceived fairness, and higher overall ratings. Of course, these are not necessarily causal relationships, and many other aspects of organizational practice likely play a role also. We can speculate that rational planning comes with a culture of learning, analysis, and use of evidence—which would provide more fertile ground for evaluation as well. Also, in cases where historical or political factors are the main drivers of spending decisions, we might not expect evaluation to be deemed a useful exercise—could it lead to any change? Where wider participation in decision-making exists, the additional stakeholders might push for evaluation, or it may be that healthcare leaders wish to determine if the value added by such engagement is commensurate with the costs and effort required.

What would an evaluation framework comprise? These findings appear to validate the acceptability of Sibbald et al.'s (2009, 2010) model. They worked with researchers and decision-makers to identify a mix of process and outcome measures that could be used to assess priority-setting and resource allocation practice; policy makers in our survey overwhelmingly indicated their willingness to consider these as indicators in any future evaluation of their own efforts. While ap-

peals are conceptually important to models of process fairness such as Accountability for Reasonableness (Gibson et al., 2004; Martin et al., 2002), empirical research has often found having such a mechanism is less widely accepted by or of importance to decision-makers (Kapiriri, Norheim, & Martin, 2007; Sibbald et al., 2010). Another larger set of items, not tested in this study or so far validated in Canada, can be found in the competencies for healthcare purchasing organizations established by the UK World Class Commissioning initiative (McCafferty et al., 2012).

Priority-setting and resource allocation are management functions that pose similar challenges to evaluation, as do things like system planning (Collins, 1999), change management (Cockerill & Lemieux Charles, 1998), or strategy implementation (Patton & Patrizi, 2010). We have some evidence in this study that senior leaders recognize possible benefits and might be receptive to greater evaluation effort. This is consistent with the trend identified across policy sectors by Gauthier et al. for "managers and front-line personnel [to be] more likely to recognize the value of evaluation and to insert evaluation practices in their habitual management processes" (2009, 29). This presents an opportunity for the evaluation community; there is a large gap to fill. However, there is also considerable literature on the difficulties in bringing evidence to bear on what remain highly political decisions, affecting which groups and interests get what. "Several observers contend that policy is less amenable than is clinical practice to evidence-based decision-making" (Schwartz & Rosen, 2004, 121). The obstacles should not be underestimated, and it is unclear if the evaluation community has the tools and conceptual frames to move forward through these challenges.

There is still a lot we do not know. These are questions that resonate throughout the entire history of the evaluation field. What did respondents understand by "formal evaluation" as a concept? Is it distinguished from quality assurance, for instance (Jarvis, 2000), or internal audit functions (Mayne, 2006)? Who is doing these evaluations: are they internal or external? To what extent are they conducted by evaluation professionals, or do they draw on knowledge and theory from the evaluation field? How well resourced are they? Are they planned in advance, or ad hoc? We cannot distinguish from our data whether evaluations currently being done are primarily focused upon process, outcomes, or both; whether they are developmental, formative, or summative in intent. We do not know why senior management teams would choose to do or not do such formal evalua-

tions, or in what way(s) they are used to change priority-setting and resource allocation practice. The data are cross-sectional rather than longitudinal, so we do not know if the proportion of organizations that undertake evaluation is growing, stable, or declining over time. These points suggest a fruitful future applied research agenda aimed squarely at healthcare improvement. Evaluators, health services researchers, and decision-makers all can cooperate in this endeavour.

NOTE

1   We created a reduced data set by randomly eliminating all but one response from each organization; this consists of 60 responses, 12 of whom indicated that their organization conducted formal evaluation. The proportions and patterns of responses in this set are substantially similar to those reported here in the main text.

ACKNOWLEDGEMENTS

REFERENCES

Anderson, J. E. (1974). *Public policy making*. New York, NY: Praeger.

Chunharas, S. (2006). An interactive integrative approach to translating knowledge and building a "learning organization" in health services management. *Bulletin of the World Health Organization, 84*(8), 652–657.

Cockerill, R., & Lemieux Charles, L. (1998). A framework for evaluating organizational change in health-care agencies and facilities. *Canadian Journal of Program Evaluation, 13*(1), 139–152.

Collins, T. (1999). Evaluating planning bodies: Some first steps from the District Health Council system. *Canadian Journal of Program Evaluation, 14*(1), 141–146.

Gauthier, B., Barrington, G.V., Bozzo, S.L., Chaytor, K., Dignard, A., Lahey, R., … Roy, S. (2009). The lay of the land: Evaluation practice in Canada in 2009. *Canadian Journal of Program Evaluation, 24*(1), 1–49.

Gibson, J. L., Martin, D. K., & Singer, P. A. (2004). Setting priorities in health care organizations: Criteria, processes, and parameters of success. *BMC Health Services Research*, *4*(25). doi:10.1186/1472-6963-4-25

Gibson, J., Mitton, C., & DuBois-Wing, G. (2011). Priority setting in Ontario's LHINs: Ethics and economics in action. *Healthcare Quarterly, 14*(4), 35–43.

Howlett, M., & Ramesh, M. (2003). *Studying public policy: Policy cycles and policy subsystems* (2nd ed.). Don Mills, ON: Oxford University Press.

Jarvis, H. (2000). Differentiating among research, evaluation and measures to assure quality. *Healthcare Management Forum*, *13*(4), 34–36.

Kapiriri, L., & Martin, D. K. (2010). Successful priority setting in low and middle income countries: A framework for evaluation. *Healthcare Analysis, 18*(2), 129–147.

Kapiriri, L., Norheim, O. F., & Martin, D. K. (2007). Priority setting at the micro-, meso- and macro-levels in Canada, Norway and Uganda. *Health Policy, 82*, 78–94.

Martin, D. K., Giacomini, M., & Singer, P. A. (2002). Fairness, accountability for reasonableness, and the views of priority setting decision-makers. *Health Policy*, *61*, 279–290.

Mayne, J. (2001). Assessing attribution through contribution analysis: Using performance measures sensibly. *Canadian Journal of Program Evaluation, 16*(1), 1–24.

Mayne, J. (2006). Audit and evaluation in public management: Challenges, reforms and different roles. *Canadian Journal of Program Evaluation, 21*(1), 11–45.

McCafferty, S., Williams, I., Hunter, D., Robinson, S., Donaldson, C., & Bate, A. (2012). Implementing world class commissioning competencies. *Journal of Health Services Research and Policy, 17*(Suppl 1), 40–48.

McEwan, K. L., & Bigelow, D. A. (1997). Using a logic model to focus health services on population health goals. *Canadian Journal of Program Evaluation, 12*(1), 167–174.

McLaughlin, J., & Jordan, G. B. (1999). Logic models: A tool for telling your program's performance story. *Evaluation and Program Planning, 22*, 65–72.

Menon, D., Stafinski, T., & Martin, D. (2007). Priority-setting for healthcare: Who, how much, and is it fair? *Health Policy*, *84*, 220–233.

Mitton, C., & Donaldson, C. (2003). Setting priorities and allocating resources in health regions: Lessons from a project evaluating program budgeting and marginal analysis (PBMA). *Health Policy*, *64,* 335–348.

Mitton, C., Patten, S., & Donaldson, C. (2004). Listening to the decision makers: Refinement of macro-level PBMA in Alberta. *Applied Health Economics and Health Policy, 3*(3), 143–151.

Patton, M. Q. (1997). *Utilization-focused evaluation: The new century text* (3rd ed.). Thousand Oaks, CA: Sage.

Patton, M. Q. (2007). Process use as a usefulism. *New Directions for Evaluation, 116*, 99–112.

Patton, M. Q., & Patrizi, P. (2010). Strategy as the focus for evaluation. *New Directions for Evaluation, 128*, 5–28.

Peacock, S. (1998). *An evaluation of program budgeting and marginal analysis applied in South Australian hospitals*. Melbourne, Australia: Centre for Health Program Evaluation.

Peacock, S., Mitton, C., Ruta, D., Donaldson, C., Bate, A., & Hedden, L. (2010). Priority setting in healthcare: Towards guidelines for the program budgeting and marginal analysis framework. *Expert Review of Pharmacoeconomics Outcomes Research, 10*(5), 539–552.

Peacock, S., Ruta, D., Mitton, C., Donaldson, C., Bate, A., & Murtagh, M. (2006). Using economics to set pragmatic and ethical priorities. *BMJ, 332*(7539), 482–485.

Robinson, S., Dickinson, H., Freeman, T., Rumbold, B., & Williams, I. 2012. Structures and processes for priority-setting by health-care funders: A national survey of primary care trusts in England. *Health Services Management Research, 25*, 113–130.

Sabik, L. M., & Lie, R. K. (2008). Priority setting in health care: Lessons from the experiences of eight countries. *International Journal for Equity in Health, 7*(4). doi:10.1186/1475-9276-7-4

Schwartz, R., & Rosen, B. (2004). The politics of evidence-based health policy-making. *Public Money & Management, 24*(2), 121–127.

Sibbald, S. L., Gibson, J. L., Singer, P. A., Upshur, R., & Martin, D. K. (2010). Evaluating priority setting success in healthcare: A pilot study. *BMC Health Services Research*, *10*(131). doi:10.1186/1472-6963/10/131

Sibbald, S. L., Singer, P. A., Upshur, R., & Martin, D. K. (2009). Priority setting: What constitutes success? A conceptual framework for successful priority setting. *BMC Health Services Research*, *9*(43). doi:10.1186/1472-6963-9-43

Smith, N., Mitton, C., Cornelissen, E., Gibson, J., & Peacock, S. (2012). Using evaluation theory in priority setting and resource allocation. *Journal of Health Organization and Management, 26*(5), 655–671.

Starbuck, W. H., & Mezias, J. M. (1996). Opening Pandora's box: Studying the accuracy of managers' perceptions. *Journal of Organizational Behavior*, *17*(2), 99–117.

Torres, R. T., & Preskill, H. (2001). Evaluation and organizational learning: Past, present and future. *American Journal of Evaluation, 22*(3), 387–395.

Neale Smith, M.A., M.E.Des., is a research coordinator with the Centre for Clinical Epidemiology and Evaluation at the Vancouver Coastal Health Research Institute and an adjunct associate professor with the University of Alberta, School of Public Health. He is a qualitative researcher with more than 15 years experience in public health, health promotion, and healthcare policy issues. He is author or co-author of more than 25 peer-reviewed articles, which have appeared in a range of journals including the *Journal of Public Health Management and Practice*, *Canadian Journal of Program Evaluation*, *Canadian Public Administration*, *Health Promotion International*, *Critical Public Health*, and the *Public Administration Quarterly*.

Craig Mitton, Ph.D., is a senior scientist at the Centre for Clinical Epidemiology and Evaluation at the Vancouver Coastal Health Research Institute and an associate professor in the School of Population and Public Health in the Faculty of Medicine at UBC. Craig holds a Michael Smith Foundation for Health Research Scholar Award and from 2005 to 2009 was at UBC Okanagan, where he held a Canada Research Chair in Health Care Priority Setting. The focus of his research is in the application of health economics to impact real-world decision-making in health organizations. He has authored or co-authored over 80 peer-reviewed publications.

Cam Donaldson, Ph.D., holds the Yunus Chair in Social Business & Health at Glasgow Caledonian University. Over the past 25 years, Dr. Donaldson has published over 200 peer-reviewed articles in economics, medical, health policy, and health management journals and has co-authored or edited several books on various aspects of health economics and public service delivery. From 2002 to 2010, he held the Health Foundation Chair in Health Economics at Newcastle University, where he was founding director of the Institute of Health & Society and professor in the Newcastle University Business School; he held the Svare Chair in Health Economics at the University of Calgary from 1998 to 2002.

Stirling Bryan, Ph.D., is director of the Centre for Clinical Epidemiology & Evaluation (VCH Research Institute) and full professor in UBC's School of Population & Public Health. He has been a university-based practicing health economist with extensive engagement to the policy and decision-making world for the past 20 years. His publications reveal an ongoing research interest in healthcare coverage decision-making processes. Previously, he was full professor at the University of Birmingham (UK) and a 2005 Commonwealth Fund Harkness Fellow.

Stuart Peacock, Ph.D., is co-director of the Canadian Centre for Applied Research in Cancer Control, a senior scientist at the British Columbia Cancer Agency, and an associate professor in UBC's School of Population & Public Health. His research interests include the economics of cancer control, priority-setting methods, health-related quality of life, and health econometrics; he has published over 130 papers on topics in these areas. Previously he held positions at Monash University, Australia, and the University of York, UK.