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Review

Public participation in health care priority setting: A scoping review

 Craig Mitton^{a,b,*}, Neale Smith^a, Stuart Peacock^{c,d}, Brian Evoy^{d,e}, Julia Abelson^f
^a University of British Columbia Okanagan, Canada^b Child and Family Research Institute, Canada^c BC Cancer Agency, Canada^d University of British Columbia, Canada^e British Columbia Medical Association, Canada^f McMaster University, Canada

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ABSTRACT

Objective: While much literature has debated public engagement in health care decision-making, there is no consensus on when public engagement should be sought and how it should be obtained. We conducted a scoping review to examine public engagement in one specific area: priority setting and resource allocation.

Method: The review drew upon a broad range of health and non-health literature in an attempt to elicit what is known and not known on this topic, and through this to outline any guidance to assist decision-makers and identify where efforts for future research should be directed.

Results: Governments appear to recognize benefits in consulting multiple publics using a range of methods, though more traditional approaches to engagement continue to predominate. There appears to be growing interest in deliberative approaches to public engagement, which are more commonly on-going rather than one-off and more apt to involve face-to-face contact. However, formal evaluation of public engagement efforts is rare. Also absent is any real effort to demonstrate how public views might be integrated with other decision inputs when allocating social resources.

Conclusion: While some strands can be taken to inform current priority setting activity, this scoping review identified many gaps and highlights numerous areas for further research.

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* Corresponding author at: Health Studies, Faculty of Health and Social Development, University of British Columbia Okanagan, 3333 University Way, Kelowna, BC, Canada V1V 1V7. Tel.: +1 250 807 8704.

E-mail address: Craig.mitton@ubc.ca (C. Mitton).

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1. Introduction

Over the last few decades, a growing literature on public involvement in health care decision-making has developed. One aspect of decision-making in the health sector, priority setting and resource allocation, also has received much attention in recent years. However, formal public involvement in health care priority setting and resource allocation activity appears to be limited. Where public input is sought it seems to be on an informal or ad hoc basis, and little consideration seems to be given to the appropriateness of the methods used. As a result, there are multitudes of approaches for public involvement that can be identified that offer little systematic basis for comparison. There seems to be no clear consensus in the literature on when public engagement should be sought, how it should be obtained, or how it might be incorporated by decision-makers into priority setting and resource allocation processes.

One author recently concluded that the present state of evidence, in relation to public engagement in decision-making, is generally weak and difficult to interpret: “At a policy-making level, [existing] literature does not help in the elaboration of productive and realistic [public] participation policies” (p. 322) [1]. Applied to priority setting, this poses a direct challenge for decision-makers. On the one hand they face regular pressures to increase meaningful public engagement from a myriad of stakeholders including other decision-makers, academics, the media, funders, other levels of government and some segments of the public itself. On the other hand, in the absence of good guidance, their efforts can be poorly designed, costly, produce confused or unusable data, and be attacked from all sides as inadequate or tokenistic [2].

In this paper we report the results of a scoping review on public involvement in health care priority setting. The focus of the review is empirical studies of public engagement processes. As other sectors such as environmental sciences and urban planning have a lengthy history of public engagement efforts, we also included these and other non-health fields in our study. The purpose of a scoping review is to identify gaps in the existing literature, thereby informing where more research may be needed in a specific area of study. In contrast to a systematic review, it “is less likely to seek to address very specific research ques-

tions nor, consequently, to assess the quality of the included studies” (p. 20) [3] but is an important first step toward this goal. Throughout this paper, public engagement is used as an umbrella term. The terms communication, consultation and public participation are used with more limited specific meanings, representing three different levels or intensities of engagement (defined below in more detail).

2. Methods

2.1. Sources

Eight reference databases were searched for the years 1981–2006: Medline, CINAHL, EconLit, PsycInfo, Social Science Abstracts, Sociological Abstracts, ABI-Inform, and Embase/Cochrane. These strike a balance between those which contain primarily health-focused articles and those which draw upon broader social science content. Subsequently, references from relevant articles were scanned to identify other papers that may not have been identified. The review also included grey literature searches although these results are not reported here.

2.2. Search terms

Preliminary search terms were developed by the research team to reflect a number of core concepts. These related to who would be consulted (the public, and synonyms for it), their role, and the key decision of interest for this review (priority setting, resource allocation, and synonyms). The final search strategy was implemented during summer 2006 with the assistance of a research librarian. Table 1 provides the Medline database search strategy; identical or slightly variant versions were employed in the remaining databases. Duplicate references were filtered out as each subsequent database was searched. Only English-language articles were retained.

2.3. Article screening and criteria

Just over 11,000 hits were obtained from the eight databases searched. These were reviewed by two of the authors with the help of three research assistants. Articles with obviously irrelevant titles were excluded as were news items, letters, editorials, book reviews, and articles appearing in newsletters or magazines rather than peer review

Table 1
Medline search terms.

| | |
|----|---|
| 1 | *community health planning/or *consensus/or *decision-making/or *health care rationing/or *health care reform/or *health facility planning/or *health plan implementation/or *health planning/or *health planning guidelines/or *health planning technical assistance/or *health priorities/ |
| 2 | *health resources/or *health systems plans/or *national health programs/or *regional health planning/or *resource allocation/or *state health plans/ |
| 3 | exp *program development/or exp *program evaluation/or exp *policy making/ |
| 4 | (priorit\$ adj2 setting).ti.ab. |
| 5 | (resource\$ adj2 allocat\$).ti.ab. |
| 6 | (prioritization or rationing).ti.ab. |
| 7 | (needs adj1 assess\$).ti.ab. |
| 8 | (budget\$ or spending or funding or governance).ti.ab. |
| 9 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 |
| 10 | exp *public opinion/ |
| 11 | *consumer participation/ |
| 12 | exp *consumer advocacy/ |
| 13 | (stakeholder\$ or public or consumer\$ or community or communities or citizen\$ or lay or layperson\$ or laypeople or layman or taxpayer\$ or grassroot\$).ti.ab. |
| 14 | (partner or partnering or deliberative or consensus or feedback or voice or voices or voicing or advocat\$ or contribut\$ or partnership\$ or hearing\$ or participat\$ or opinion\$ or input or involv\$ or view\$ or choice\$ or role\$ or responsibilit\$ or value\$ or preference\$ or engage\$ or engaging or consultation\$ or consult or consulting or communicat\$ or deliberate or deliberating or deliberation\$ or dialogue\$ or discuss or discussing or discussion\$ or debate\$ or interact or interacting or interaction\$ or governance).ti.ab. |
| 15 | ((stakeholder\$ or public or consumer\$ or community or communities or citizen\$ or lay or layperson\$ or laypeople or layman or taxpayer\$ or grassroot\$) adj1 (partner or partnering or deliberative or consensus or feedback or voice or voices or voicing or advocat\$ or contribut\$ or partnership\$ or hearing\$ or participat\$ or opinion\$ or input or involv\$ or view\$ or choice\$ or role\$ or responsibilit\$ or value\$ or preference\$ or engage\$ or engaging or consultation\$ or consult or consulting or communicat\$ or deliberate or deliberating or deliberation\$ or dialogue\$ or discuss or discussing or discussion\$ or debate\$ or interact or interacting or interaction\$ or governance)).ti.ab. |
| 16 | 10 or 11 or 12 or 15 |
| 17 | 9 and 16 |

journals. The remaining abstracts were retrieved, read and assessed on three criteria:

- Does the article deal with *public* engagement or involvement in decision-making?
- Does the article deal with public engagement in *macro- or meso-level* decisions rather than *clinical* decision-making?
- Does the article deal with public engagement in *priority setting* or *resource allocation* decisions?

Theoretical and conceptual work that provides an important backdrop to the scoping review is referenced throughout this paper; however, only empirical studies of public engagement are reported in the scoping review findings. We included articles where the public appeared to be (1) ordinary or lay citizens/community members; (2) representatives of organized social interest groups, including coalitions, partnerships, etc., but not cases where this is reflective of professionals or experts only; and (3) organization staff members/employees and/or

patients/customers/clients, but only insofar as they are providing input from a broader societal perspective rather than exclusive patient perspective.

Macro-level decisions were defined as those relating to broad strategic directions or overarching policies, and general budget allocations. Meso-level decisions involve priority setting or allocation within particular categories of programs or services. While clinical rationing (e.g., allocation of organs for transplant) may imply a larger set of surrounding policy questions and choices (i.e., the establishment of regulatory frameworks within which clinicians will ration), we excluded such articles unless they focused directly upon how the broader public might be engaged in discussions leading to the establishment of such frameworks. The issues involved in policy choices across the various sectors obviously differ in content, but our assessment process limited our set of articles to those in which there were clear considerations of priorities or resource allocation trade-offs; thus we feel the circumstances reported are comparable enough to be synthesized in this review. Through the initial screening process, the number of articles was reduced to 405. All but 14 of these articles were retrievable and thus in total 391 full articles were reviewed.

2.4. Assessment and analysis

Two of the authors and two research assistants read and assessed these 391 articles, using an instrument containing 24 questions that was developed for this project (see Table 2).

The questions were both descriptive and based upon key issues articulated by the theoretical engagement literature; their wording was refined by the full research team through an iterative process that included trial coding, team discussion and coding refinement. A further 216 articles were set aside during this stage as strictly theoretical or conceptual; these were incorporated into the discussion of the scoping review results, but are not included in for the assessment and summary statistics reported below.

A total of 175 articles were ultimately retained for analysis. The total number of distinct cases of public engagement reported by the 175 articles was 190; the latter is the base number for all data reported below, unless otherwise indicated. It was also possible for each case to include more than one method for involving the public. After data cleaning, the numeric results from the 24 questions were imported into SPSS version 15. Cross-tabs of key variables are reported here. Within each question, similar articles were grouped based on the assessment results; these groups were read closely and in comparison to identify common themes [4].

3. Results

Given the quantity of data obtained from our detailed assessment of this large number of articles, it is impossible to report all of the results in this paper. Findings are reported for four broad areas: sources and distribution of cases; details of the engagement process; defining and recruiting the public; and methods, cost, and outcomes of engagement.

Table 2
Assessment questions.

| | |
|----|---|
| 1 | Is priority setting explicit or implicit? |
| 2 | Date of publication |
| 3 | Is article peer-reviewed? |
| 4 | Country where study was done |
| 5 | Sector: health or other [with subcategories] |
| 6 | Level of government |
| 7 | Type of geographic community |
| 8 | Definition of public(s) that is being consulted |
| 9 | Method for selecting those consulted (sampling, selection or recruitment technique) |
| 10 | Is there explicit discussion related to involvement of 'disadvantaged' or 'marginalized' groups? |
| 11 | Intent to engage the public [i.e., the rationale or the "why"] |
| 12 | Type(s) or scope of decision described |
| 13 | Method or technique(s) of public engagement employed |
| 14 | Decision-maker(s) who is the primary 'sponsor' or originator of the consultation |
| 15 | Did consultation include at least one instance of direct face-to-face interaction between the public and the decision-maker? |
| 16 | Was consultation with the public mandated (by a higher level of government, or the courts), or voluntarily entered into? |
| 17 | Is public engagement one-time or on-going? |
| 18 | Is explicit discussion given to ethical issues? |
| 19 | Does article contain information about the monetary cost of undertaking the specific public engagement exercise(s)? |
| 20 | Does the article demonstrate how public input might be integrated with other forms of evidence or data in the decision-making process? |
| 21 | Is the participation process evaluated in any way? |
| 22 | What was the authors' conclusion if any regarding success of consultation? |
| 23 | What was the authors' conclusion about whether or not the public's input actually had an impact (made a difference) to the outcome of the decision? |
| 24 | Are participants directly informed about the results of the process and/or how their input was used? |

3.1. Sources and distribution of cases

3.1.1. Year of publication and geographical distribution

The public participation in priority setting and resource allocation literature has most evidently emerged since the mid-1990s. Eighty-four percent of the reviewed articles were published in or later than 1995, and 59% have been published since the year 2000. Two-fifths of the articles identified in our review described projects situated in the US (40%). The UK accounts for 26% of the cases, with smaller numbers in the rest of Europe (8%), Canada (9%), Australia/New Zealand (7%) and elsewhere. This distribution reflects the restriction of the literature search to English-language articles.

Before the mid-1990s, the literature appeared to be mostly centered on US cases (over one-half of all instances). Much of this addressed the well-known Oregon experiment [5,6], in which public consultations and expert assessments were combined to develop a league table of procedures that would be funded by the state's Medicaid program for low-income individuals and families (6 out of 29 articles, or slightly more than 20%).

The geographic scope of research has expanded in subsequent years. Between 1995 and 1999, the largest single source was the UK (40%). While the National Health Service historically had "afforded little scope for a pro-active role on the part of local populations with regard to manage-

rial and profession decision-making" (p. 447) [7], efforts to open the system to public input gained ground, and academic attention, through the 1990s. Other policy sectors were similarly influenced [8]. Several major research projects into public participation were initiated in the UK around this time, including investigations of citizen juries [9,10]. Health reform efforts in Canada and Australasia in the mid- to late-1990s also put a spotlight on public engagement. Public involvement in local decision-making was a stated objective of health system restructuring and the creation of regional health authorities in Canada [11]. Additional research and advocacy for public engagement were generated by Canada's Romanow Commission [12]. New Zealand's efforts to establish core health services were a key policy contributing to research interest in public engagement in priority setting in that country [13].

3.1.2. Sector and level of government

It was relatively rare for there to be discussion of trade-offs across sectors (e.g., between health and education); only 16 cases included both health and non-health sectors. Where these occurred, they were in the context of general assessments of public priorities for government spending, or in the development of broad vision statements. 97 cases addressed solely priority setting in the health sector, and 77 cases identified took place in non-health sectors.

A range of sub-sectors in the health field were represented in this data. The most common was public health and health promotion ($n=39$), followed by consultations that addressed general policy issues and a range of spending options ($n=31$). Consultations within regional health authorities or other integrated health systems about prioritization over a range of services were the focus of 15 cases. A limited number of cases looked specifically at public engagement in priority setting for mental health ($n=5$), acute care ($n=4$), pharmaceuticals or health technology assessment ($n=5$), and long-term care ($n=5$).

Among non-health cases, the leading source were the environmental sciences ($n=24$) and urban planning ($n=23$) fields. There were nine cases included from the parks, recreation and leisure area, and seven from transportation planning. Also represented by small numbers of cases were areas such as education, criminal justice, energy policy and labour and workforce policy.

Overall, there was an even distribution of cases among different levels of government. Of the cases reviewed, 16% were national government exercises, 13% provincial or state level, 11% regional, and 16% municipal or local government. In 16% of instances, multiple levels of government cooperated or worked with community groups or NGOs collaboratively to engage the public in priority setting. The largest and smallest scales were least represented; only 2% of cases were inter- or trans-national in scope, and 5% were conducted at the neighborhood or sub-municipal scale.

3.2. Details on engagement processes

3.2.1. Scope of engagement

Lomas presented a three-level scale to assess the scope of public engagement [14]. The highest or macro-level

Table 3

Definition and recruitment of the public, by number of cases.

| | Sampling method | | | |
|---|-----------------------|--------------------------|---------------------|----------------------------------|
| | Random selection only | Purposive selection only | Self-selection only | Combination of selection methods |
| Public to be engaged | | | | |
| Patients or service users or consumers only | 1 | 10 | 2 | 1 |
| Representatives of organized groups only | 0 | 17 | 2 | 1 |
| Individual citizens only | 17 | 13 | 9 | 3 |
| Multiple publics are involved | 2 | 29 | 7 | 53 |

For 23 cases, either the nature of the public or the method of sampling was uncodable.

relates to which services should be funded (allocations to health vis-a-vis other services, and general principles for financing and organization). The meso-level relates to specific services and programs. The third level relates to decisions about the terms under which classes of patients (as opposed to specific individuals) should receive services, i.e., what clinical or demographic factors should render the 'typical' patient eligible or ineligible for treatment. We employed a modified version of this scale, including a fourth category—monitoring and evaluation; this reflects our view that evaluation, because of its potential impact upon program and policy decisions, can be an implicit form of priority setting. The bulk of the literature describes processes at the highest levels—either broad system design (31%) or in system planning functions (i.e., the allocation of resource to programs, sites, or services) (53%). Often both of them were addressed by the same case. Fewer examples were reported at the meso-level. This is unsurprising since it is clear that the public is more reluctant to desire involvement in choices where the impact on individuals' possible receipt of service is more direct [15,16]. There were also relatively few reported instances of public engagement in deciding upon monitoring or evaluation strategies.

Table 4Method(s) of public engagement employed.^a

| | | |
|--|----|-----|
| Communication | | |
| Type 1—(traditional publicity, e.g., newspaper ad) | 33 | 99 |
| Type 2—(public hearing or public meeting) | 57 | |
| Type 3—(drop in center, Internet information) | 7 | |
| Type 4—(hotline/1-800 number) | 2 | |
| Consultation | | |
| Type 1—(opinion poll or survey) | 73 | 233 |
| Type 2—(referendum) | 1 | |
| Type 3—(consultation document with select persons or groups) | 38 | |
| Type 4—(electronic consultation/interactive website) | 7 | |
| Type 5—(focus group) | 46 | |
| Type 6—(study circle or open space) | 17 | |
| Type 7—(standing citizens' advisory panel) | 51 | |
| Participation | | |
| Type 1—(citizens' jury or consensus conference) | 18 | 73 |
| Type 2—(negotiated rule making or task force) | 14 | |
| Type 3—(deliberative poll or planning cell) | 23 | |
| Type 4—(town meeting with voting) | 18 | |

^a Adopted from [24].

3.2.2. Mandate of activity

Public consultation can be mandated by law or regulation, or it can be voluntarily undertaken. Examples of mandated engagement would include provisions for stakeholder involvement in impact assessment under the US National Environment Protection Act [17]; Local Voices and subsequent guidance to health purchasers in the UK [18]; or the role of Community Health Councils in advising Alberta's Regional Health Authorities [19]. For cases where this could be identified (82% of the total), there was approximately a 2.25:1 ratio in favour of voluntary initiation. It is possible for organizations to go beyond legislated requirements to obtain additional public participation. Regardless of whether a consultation was mandated or voluntary, the choice of approach was usually left open enough to allow for considerable discretion and possibility of experimentation on the part of the consultation sponsor [20,21].

3.3. Defining and recruiting the public

We coded the articles to determine how the sponsors of different engagement processes understood the 'public' whose engagement they sought. We defined three distinct categories—the public as individual citizens speaking on their own behalf, the public as organized interest groups supposedly speaking on behalf of their membership, and the public as patients or consumers of services, in those relatively few instances where they are asked to speak on issues broader than their own personal experience.

The public could be defined for 167 of our 190 cases. Most of these cases reported multiple publics being consulted ($n=91$). Where only a single public was identified, it was twice as likely to be members of the public as citizens ($n=42$) compared to interest group representatives ($n=20$). Note that it is possible that people chosen to participate as individuals may still speak to or represent their understanding of a group view, rather than simply articulating personal direct experience [22].

Slightly more than one-third of cases (38%) reported that particular attention was paid to soliciting the input and participation of disadvantaged populations or groups with special needs (as defined by the authors of the articles). This included a wide range of participants such as the poor (27), children (14), visible or ethnic minorities (11), aboriginal persons (12), persons with disabilities (9), seniors (8), women (11), mental health consumers (4), illiterate or persons of low education (5), the homeless (4), single parents (2) and others. Such groups traditionally have not been involved in decision-making, and they may have con-

Table 5

Comparison of deliberative and non-deliberative public engagement processes by time period and duration.

| | Deliberative engagement processes | Non-deliberative engagement processes |
|-------------|-----------------------------------|---------------------------------------|
| Time period | | |
| 1980s | 18% | 82% |
| 1990–1994 | 28% | 72% |
| 1995–1999 | 34% | 66% |
| 2000–2006 | 37% | 63% |
| Duration | | |
| One-time | 25% | 75% |
| On-going | 44% | 56% |

Row totals in each panel add to 100%.

cerns or needs of the system which may not be adequately identified through a general consultation process. “When participation is open to all it often becomes unequal” (p. 181) [23]. Clearly some authors have chosen to engage directly with the disadvantaged; however, we have insufficient grounds to judge whether this amount of attention is adequate to the task. In terms of selecting the participants, a combination of methods was used in 53 cases. Across all cases, purposive recruitment was most popular ($n=69$), followed by self-selection ($n=20$) and random sampling ($n=20$) (see Table 3).

3.4. Methods, cost, and outcomes of engagement

3.4.1. Methods

A core objective of our review was to determine the range of techniques used to engage the public in priority setting decisions. We coded articles using a framework developed by Rowe and Frewer [24]. This has three distinct ‘levels’ of participation, ranging from least to most interactive: communication, consultation, and participation. In communication, there is one-way transfer of information from the decision-maker to the public; in consultation, information is provided by the public to decision-makers, but without interaction or formal dialogue. At the highest level, participation, “the act of dialogue and negotiation serves to transform opinion in the members of both parties” (pp. 255–256). Within this threefold framework, 15 discrete techniques can be identified (see Table 4).

Most of the reported cases used multiple methods for obtaining public input (96 cases of 183 codable cases). Across all of the articles included in the review, a total of 405 techniques were employed. Fifty-eight percent (58%) of these fell into the middle level (consultation), 24% at the lowest level (communication), and 18% at the highest level (participation). As shown in Table 4, the most commonly employed specific methods were those associated with traditional approaches to gathering public input. However, deliberative methods appear to have gained ground in recent years. In each successive time period, from the 1980s, to 1990–1994, 1995–1999, and 2000–2006, the proportion of cases in which at least one deliberative method was employed increased (Table 5).

3.4.2. Episodic or one-off engagement

Cases of public participation were also coded as either one-time occurrences or as representing an on-going pro-

cess for regularly obtaining public input. Codable results were fairly evenly balanced: 49% were one-time events and 45% were on-going over a period of time. For those processes that were intended as on-going, the mean duration at the time of publication was just short of 4 years (median = 3 years).

White argues that administrators prefer forms of participation without sustained interaction, to minimize the prospect that public members can organize around alternative agendas or threaten administrative efficiency [25]. However, others have argued that participatory processes require some degree of “on-going engagement to develop meaningful communication and trust” (p. 44) [26]. In our review, deliberative methods seemed more prone to be employed in the context of on-going engagement exercises; at the consultation level, 60% of cases were one-time and 36% on-going, while at the participation level this was reversed: 37–57%. A relationship between duration and perceived outcomes did not appear, as both episodic and on-going exercises were assessed as successful in about 60% of cases.

3.4.3. Face-to-face interaction

We coded the articles to determine if the engagement processes allowed opportunities for the public to meet and interact with the decision-makers face-to-face at least once during the course of the priority setting activity. About 40% of cases allowed for this. One illustrative example is decision-makers working with community members to identify priorities for change on a low-income housing estate in south London [27]. Residents and staff worked together on needs assessment study teams, and the decision-makers entered into negotiations with their own organizations about how to meet concerns as the assessment was on-going. Our data suggest that deliberative methods appear more commonly to have a face-to-face component (Table 6). Leighninger describes one example from Oklahoma in which the presence and active participation of elected officials contributed to substantial correctional system reforms [28]. Another model, the AmericaSpeaks 21st Century Town Hall process, has as one of its core principles that decision-makers “must be present, listening and publicly committed to taking outcomes into consideration” (p. 355) [29].

Table 6

Comparison of deliberative and non-deliberative public engagement processes by the presence of face-to-face interaction and perceived outcomes.

| | Deliberative engagement processes | Non-deliberative engagement processes |
|---------------------------|-----------------------------------|---------------------------------------|
| Face-to-face interaction? | | |
| Yes | 62% | 30% |
| No | 13% | 38% |
| Unclear | 25% | 32% |
| Perceived outcomes | | |
| Good | 78% | 54% |
| Fair or poor | 13% | 19% |
| Unclear | 9% | 27% |

Column totals in each panel add to 100%.

Table 7

Public engagement in priority setting: overview of the findings.

| | |
|---|---|
| Sources and distribution of the cases | There has been steady growth in the number of empirical case studies of public engagement over recent years This literature is distributed across the English-speaking world and often spikes following major health care or other government reform efforts Cases occur frequently in the health, environment, urban planning sectors, but are also increasingly evident in other sectors like transportation, criminal justice |
| Details on engagement processes | All levels of government report efforts to engage the public(s) A large minority of projects are researcher-initiated but most cases have direct sponsorship by government bodies of some sort Public engagement is most common at the visioning or goal setting level, and in specific decisions about sites or programs; it is less common in monitoring or evaluation The search for effective means of public engagement often goes beyond the minimum legally mandated requirements |
| Defining and recruiting the public | Multiple publics are identified in the literature Purposive recruitment is most common, with some use of random and self-selection |
| Methods, cost, and outcomes of engagement | A range of methods are used; traditional approaches are most common but over time there has been increasing experimentation with more deliberative designs Consultations are typically one-off rather than on-going, and not likely to involve the public in direct face-to-face interaction with decision-makers Costs are seldom reported, but well-structured processes can range from tens of thousands of dollars to the million-plus range Engagement exercises are rarely formally evaluated Despite lack of evaluation, results are generally seen as successful and often claimed to lead to direct impact on decisions There is a lack of practical guidance for integrating public input with other forms of evidence |

3.4.4. Cost of engagement

Cost of engagement, along with the difficulty of fitting into organizational timeframes for decision-making, is frequently seen as one of the major barriers to public engagement in priority setting and other key decisions. Given this, it is perhaps remarkable how few cases actually identify the costs involved in public engagement in resource allocation. In our review, only 13 cases (7%) explicitly identified the costs associated with the chosen participation processes. In a further 14% of cases, it seemed possible that enough details were provided that experienced health system managers might be able to estimate the expenses required.

Large scale and intensive deliberative projects, such as the AmericaSpeaks town halls or the ChoiceWorks dialogues conducted for Canada's Commission on the Future of Health Care in Canada, can run into the million dollar range [12,30]. Smaller scale efforts can require tens of thousands of dollars, much of which is accounted for by staff time. For instance, the development of Edmonton's health goals in the early 1990s required 1.5 full time positions over 18 months [31], while the design, preparation, and conduct of two public value forums in Germany required 60 person days' professional and participant time [32]. Staffing and supporting a city-wide citizen's advisory panel on transportation in Boulder, Colorado obtained "over 1,000 hours ... of systematic, reliable, informed, community-representative citizen input in an immediately usable form" (p. 53) [33].

3.4.5. Perceived success and impact

White states that "the vast and eclectic literature on participation displays a common feature: a singular lack of concern with outcomes, or the effectiveness of participation" (p. 466) [25]. This is confirmed by our review, which

found few reports of public engagement processes in priority setting being evaluated for their effectiveness. Direct comparison of different methods under experimental conditions is almost completely absent. In 37% of our cases it was unclear or unspecified if evaluation had been undertaken; in another 29% of cases evaluation was stated not to have occurred. In only 32% of cases evaluation was reported. Process evaluation was more likely than evaluation of outcomes at a ratio of 4:3.

About two-thirds of the articles concluded that the participation process had been successful (as defined by the original authors). Results were deemed to be mixed or indifferent in 14% of cases. In only 6% of the cases assessed the original authors concluded that participation was unsuccessful. Cases in which deliberative methods were used were seen as more successful than approaches in which lower levels of engagement such as communication or consultation were employed (78–54%) (Table 6). Cases in which there was face-to-face interaction appeared to be rated by the original authors as more successful than those in which there was no direct interaction between public participants and decision-makers (75–49%).

Conclusions about success did not appear to depend upon the presence or absence of formal evaluation. Sixty-two percent (62%) of cases in which a formal evaluation occurred were classified as successful by the original authors. For cases without formal evaluation or where its occurrence was unclear, 61% were classified as successful. However, poor or indifferent results were determined for 28% of cases with formal evaluation, and only 13% of cases without. So it may be that authors are more reluctant to be critical of the results of a participation intervention in the absence of evaluative data.

Authors were somewhat less likely to conclude that engagement had made a difference, defined here as lead-

ing to a decision other than what would have been arrived at in its absence. Where affecting an actual decision was the intention of the engagement process (which was not true of all cases reviewed), sixty percent (60%) of the cases stated that an impact – as defined here – had been achieved, while 10% stated that this was not the case. In 30% of cases, judgment on this point was either unclear or unspecified.

3.4.6. Integration of public input

Public views are seldom, if ever, the only information that is considered when making decisions. Other forms of evidence, such as research-based information, professional experience, political judgment, or habits and tradition, are also available to decision-makers [34]. Combining these forms of evidence has been characterized in recent environmental policy studies as an ‘analytic-deliberative’ process:

Seeing a policymaking process as a combination of analysis and deliberation is an important advancement, mainly because it corrects shortcomings with the traditional view that policymaking is an uneasy combination of science and politics. It is incorrect to equate analysis with science and deliberation with politics. Deliberation is also informed by science (usually the social sciences), and analysis can be done by scientists as well as lay people (p. 531) [35].

Yet the literature provides little direct guidance on how the different inputs might be integrated. Nineteen percent of our cases discussed this issue and provided some strategies or approaches that might be employed to this end. However, more than half of the cases (56%) did not address the question or did no more than acknowledge it as an issue without attempting a resolution. In 25% of cases, it was unclear how, if at all, the decision-makers combined different sources of information to determine priorities and, ultimately, to allocate resources.

4. Discussion

There is a very substantial body of literature from the past quarter-century exploring questions of public participation in priority setting and resource allocation. Much of this is conceptual, theoretical, or advocacy-oriented, but an increasing number of empirical case studies have been published. Health care sector examples are available from a wide range of countries, and from across health care contexts including integrated service organizations generally as well as specific fields such as public health, mental health and acute care. There are also useful experiences reported from non-health sectors which can inform health care planning and decision-making.

The literature covers all levels of government, from national to local, so decision-makers are likely to find some parallel to their own setting and situation. And the varied extent of decision-maker involvement in public engagement exercises is indicative of the pressures they face to satisfy demands for a greater public role in priority setting. The studies we identified in this review report such features of public engagement as who participates, the methods or techniques used to obtain input, and the observed or antic-

ipated outcomes of such exercises. Our key findings are summarized in Table 7.

So what do these findings mean in terms of what we know, and what we do not know, about public engagement in priority setting? Many decision-makers appear to use multiple methods to engage multiple publics, and to use methods from the different levels of Rowe and Frewer’s typology in combination—in our view, this provides a balance between breadth and depth that may lead to a more rounded understanding of the public’s desires. Our results also suggest that authors of more deliberative processes find these to produce better results. There also seems to be better satisfaction with the outcomes of processes in which there are opportunities for face-to-face interaction among public participants and decision-makers. The ability and willingness to seek public input in an on-going, sustainable fashion over time also seems to be a promising way of obtaining public engagement in priority setting when compared to single or one-shot exercises.

Very rarely have experimental designs contrasted the effectiveness of public engagement under controlled conditions, though there have been some studies carried out with health regions in Canada. Abelson et al. compared traditional survey approaches with face-to-face group meetings, and found that the opportunities for deliberation made it more likely that participant’s prioritizations could change [36]; this reflects the conclusions of Dolan et al. [37]. However deliberation effects appeared to be somewhat context-dependent, a result confirmed by Abelson et al. [2]. There is growing interest in and demand for such work [38]. Proponents of new deliberative processes, in particular, seek to demonstrate effectiveness of their models [39], which is needed if these typically more costly and demanding techniques are to be adopted by decision-makers. Rowe and Frewer have contributed particularly valuable work in establishing approaches to the evaluation of public participation generally, which could be extended to the priority setting and resource allocation sphere [40,41]. Beierle and Cayford have reviewed cases of public participation in the environmental sciences [42], but comparable work to our knowledge has not been done in other non-health sectors.

There are several other key gaps evident in the literature. One is identifying what role, if any, the public plays in setting performance measures, monitoring and evaluation design. The absence of such studies in our search is somewhat surprising in the light of the increasing advocacy in the literature for participatory evaluation processes and the recognition that, ‘what gets measured is what gets done’. However, it may have been that our chosen databases and search terms did not identify evaluation-related articles effectively. Alternatively, Ho may be correct in claiming that “the public and external stakeholders are seldom involved in defining, selecting, and using performance measures” (p. 107) [43].

We also need to consider whether disadvantaged or vulnerable populations should be approached with unique or modified engagement mechanisms. Questions of interest might include the reasons why these groups were consulted, if the consultation was only with these groups or if the data were combined with more general ‘public opinion’, and if there was anything distinctive about the approaches

used. From a practice perspective, an obvious gap is guidance about how to integrate the results of different public engagement processes with different forms of evidence. In addition, in the studies reviewed, there was typically no recognition that different methods might produce different impressions of the public's preferences or consideration of how discrepancies might be reconciled in setting priorities or allocating resources.

The results reported here are subject to certain limitations. First, the emphasis of the scoping review on public participation practice necessarily resulted in the exclusion of large subsets of the public participation literature (e.g., public participation expressed via market mechanisms, political and legal systems; decision-maker views about the desirability and feasibility of public engagement; the psychology of decision-making and priority setting environments). Priority setting (more so than resource allocation) is potentially a very elastic concept; others might define the term in a more or less inclusive way than we have done, consequently capturing a somewhat different literature for review. In addition, our assessment produced uncodable or incomplete data in some areas, due in part to incongruence between what we were seeking to find and what was reported. As such, our conclusions about the direction and weight of results are more tentative than we would have hoped.

5. Conclusions

There are some practices for public engagement in priority setting which appear promising, as described above – that is, seem generally supported by their authors in the published reports – and would bear further investigation as to the contexts in which they might best be pursued—for instance the use of multiple methods and the balancing of broad consultations with in-depth engagement using new deliberative techniques. The many differences in background, reporting, aim, content and implementation of engagement efforts make it challenging to undertake systematic comparisons. In addition, a lack of evaluation studies constrains our ability to say that the evidence backs any particular approach to public engagement in priority setting. Judgments of success in the literature do not appear related to the presence or absence of evaluation. This clearly supports a greater need for such public participation exercises to be subject to formal evaluation.

This scoping review was a first step by the authors toward the development of a set of heuristics for decision-makers concerned with the role of public input in priority setting and resource allocation. Many decision-makers are seeking academic support and advice in moving forward in this area. Ultimately, the intention of such guidelines would be to maximize the quality and usefulness of public engagement. Clearly, further study is needed before there is sufficient evidence to make such recommendations as, 'if your circumstances are similar to situation X, then Y or Z approaches to public engagement appear to have been successful in the past'. Careful consideration of the context must occur before any particular approach to engagement is adopted. Any such guidelines would, of course, have to be interpreted relative to the varying objec-

tives which decision-makers (and citizens) might have for such exercises—which as we have noted, are frequently not made explicit. The next immediate step is to identify specific research projects to address key gaps identified through this scoping review. In our view, this can only be done through collaboration between decision-makers faced with real world constraints in engaging the public to inform priority setting and resource allocation decisions and researchers with interests in this important topic area.

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¹ Note: References marked with a "*" are empirical cases of public participation in priority setting which were assessed as part of this scoping review project. The complete list of included articles is available from the authors.

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