

Patient, Public, and Healthcare Professionals' Sepsis Awareness, Knowledge, and Information Seeking Behaviors: A Scoping Review*

OBJECTIVES: Sepsis awareness and understanding are important aspects of prevention, recognition, and clinical management of sepsis. We conducted a scoping review to identify and map the literature related to sepsis awareness, general knowledge, and information-seeking behaviors with a goal to inform future sepsis research and knowledge translation campaigns.

DESIGN: Scoping review.

SETTING: Using Arksey and O'Malley's methodological framework, we conducted a systematic search on May 3, 2021, across four databases (MEDLINE, EMBASE, CINAHL, and Education Research Complete). Title/abstract and full-text screening was done in duplicate. One researcher extracted the data for each included article, and a second researcher checked data accuracy. The protocol was registered on Open Science Framework (<https://doi.org/10.17605/OSF.IO/YX7AU>).

SUBJECTS: Articles related to sepsis awareness, knowledge, and information seeking behaviors among patients, public, and healthcare professionals.

INTERVENTIONS: None.

MEASUREMENTS AND MAIN RESULTS: Of 5,927 unique studies, 80 reported on patient ($n = 13/80; 16.3\%$), public ($n = 15/80; 18.8\%$), or healthcare professional (nurses, physicians, emergency medical technicians) ($n = 48/80; 60\%$) awareness and knowledge of sepsis. Healthcare professional awareness and knowledge of sepsis is high compared with patients/public. The proportion of patients/public who had heard of the term sepsis ranged from 2% (Japan) to 88.6% (Germany). The proportions of patients/public who correctly identified the definition of sepsis ranged from 4.2% (Singapore) to 92% (Sweden). The results from the included studies appear to suggest that patient/public awareness of sepsis gradually improved over time. We found that the definition of sepsis was inconsistent in the literature and that few studies reported on patient, public, or healthcare professional knowledge of sepsis risk factors. Most patient/public get their sepsis information from the internet, whereas healthcare professionals get it from their role in healthcare through job training or educational training.

CONCLUSIONS: Patient, public, and healthcare professional awareness and knowledge of sepsis vary globally. Future research may benefit from a consistent definition as well as country-specific data to support targeted public awareness campaigns.

KEY WORDS: awareness; healthcare professional; information-seeking behavior; patient; sepsis

Sepsis, as defined in 2016, is a life-threatening organ dysfunction caused by a dysregulated host response to infection (1). In 2017, there were an estimated 48.9 million sepsis cases and 11 million sepsis-related deaths worldwide (2). Prevention of community- and hospital-acquired infections can reduce sepsis prevalence (3). Furthermore, early recognition, diagnosis, and

Kirsten M. Fiest, PhD^{1,2,3}

Karla D. Krewulak, PhD¹

Rebecca Brundin-Mather, MASc¹

Madison P. Leia, MA¹

Alison Fox-Robichaud, MD⁴

François Lamontagne, MD⁵

Jeanna Parsons Leigh, PhD⁶

for Sepsis Canada

*See also p. 1277.

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appropriate clinical management of infections and sepsis can, respectively, prevent sepsis and improve sepsis outcomes (4–6). Although sepsis is a preventable cause of death worldwide, it is not widely recognized by patients and the general public (7, 8), and knowledge gaps persist among healthcare professionals (HCPs) (9–11).

Increasing public and HCPs' awareness of sepsis, its risk factors, and its symptoms are crucial to reducing the global burden of sepsis (8, 12, 13). This began with the inception of the Surviving Sepsis Campaign (SSC) at the Annual Meeting of the European Society on Intensive Care Medicine in Barcelona (2002). The first initiative of the SSC (the "Barcelona Declaration") aimed to reduce sepsis mortality by 25% within 5 years through urging HCPs and governments to improve sepsis management through a six-point action plan: awareness, diagnosis, treatment, education, counseling, and referral (14). Guidelines for clinical management of sepsis (SSC Sepsis Bundles) were created in 2004 (4) and have since been updated (15, 16). Many organizations and resources have also been created (e.g., Global Sepsis Alliance, World Health Organization, U.S. Centers for Disease Control and Prevention, and The U.K. Sepsis Trust) in response to the need to increase sepsis awareness, including the establishment of World Sepsis Day in 2012 by the Global Sepsis Alliance (17–20).

Despite the creation of several public healthcare campaigns, there is an incomplete understanding of the empirical literature on sepsis awareness and knowledge. Furthermore, it is largely unknown how individuals may seek and access sepsis information; central considerations in developing effective public health messaging. The aim of this scoping review was to identify and map the literature related to sepsis awareness, general knowledge, and information-seeking behaviors with a goal to inform future sepsis research and knowledge translation campaigns.

METHODS

We conducted the scoping review using Arksey and O'Malley's methodological framework and according to the Preferred Reporting Items for Systematic Review and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist (**Supplementary Table 1**, Supplementary Digital Content, <http://links.lww.com/CCM/H126>) (21). Approval from institutional

research ethics board was not required as the study did not involve human participants, human material, or human data.

On May 3, 2021, we searched MEDLINE (Ovid), EMBASE (Ovid), CINAHL (EBSCOhost), and Education Research Complete (EBSCOhost) for MeSH terms and keywords related to sepsis awareness, knowledge, and information-seeking behaviors in conjunction with terms and keywords related to sepsis (**Appendix 1**, Supplementary Digital Content, <http://links.lww.com/CCM/H126>). No language or date restrictions were applied. Results were combined and deduplicated in EndNote X9 (Clarivate Analysis) (22) and uploaded to Covidence systematic review software (Veritas Health Innovation, Melbourne, VIC, Australia) for title/abstract and full-text review.

We included peer-reviewed journal articles if they focused on sepsis-related health information seeking, sepsis-related educational campaigns, or current levels of sepsis awareness or general knowledge. We excluded published commentaries, editorials, reviews, and conference abstracts/proceedings and articles that focused on clinical knowledge of sepsis. Articles not available in English were translated using Yandex or Google (23–25).

Three researchers independently screened titles/abstracts in duplicate, with any abstract included by at least one researcher advancing to full-text screening. Full-text articles were screened in duplicate, with conflicts resolved by discussion or a third researcher. References of included articles were assessed for potential inclusion.

One researcher extracted study characteristics (location/design/date range/setting), population information (sample size/participant role/age/gender/sex/ethnicity), and health information (modality/source/level of knowledge/awareness/education); a second researcher verified the data. Our protocol is registered on Open Science Framework (<https://doi.org/10.17605/OSF.IO/YX7AU>).

RESULTS

From 5,927 unique studies, we included 80 studies (**Supplementary Fig. 1** and **Appendix 2**, Supplementary Digital Content, <http://links.lww.com/CCM/H126>). Nearly half of included studies used a cross-sectional design ($n = 39/80$; 48.8%). Study characteristics

and references are listed in **Supplementary Table 2** and Appendix 2 (Supplementary Digital Content, <http://links.lww.com/CCM/H126>). The studies included patients ($n = 13/80$; 16.3%; $n = 1,100$), members of the public ($n = 15/80$; 18.8%; $n = 15,400$), or HCPs (pre hospital [e.g., emergency medical technicians (EMTs) or dentists] and in-hospital [e.g., nurses, physicians]) ($n = 48/80$; 60%; $n = 70,340$). Patients included sepsis survivors ($n = 6/13$; 46.1%), postnatal mothers, ($n = 3/13$; 23.1%), and people with learning disabilities/preoperative patients/surrogates of sepsis patients

(each $n = 1/13$; 7.7%). Five studies did not report a study population.

Awareness

A total of 20 studies ($n = 20/80$; 25%) reported on sepsis awareness (e.g., had heard of the term “sepsis” or, in two studies, Haiketsushou, which means “sepsis” in Japanese). Of these 20 studies, 12 (60%) reported on patient ($n = 4/20$; 20%) or public ($n = 8/20$; 40%) awareness of sepsis, and nine ($n = 9/20$; 45%) reported

on HCP awareness. One study included patients and HCPs (26). The proportion of patients/public who had heard of the term sepsis ranged from 2% (Japan) to 88.6% (Germany). Patient/public awareness of sepsis gradually improved over time with the changing Sepsis definitions (1, 27, 28) and inception of World Sepsis Day (Fig. 1). Notably, only two studies ($n = 2/8$; 25%) that included patients and public reported more than 50% of participants being aware of the term sepsis (i.e., most reported < 50%). In comparison, there was a higher proportion of HCPs who have heard of the term sepsis, which ranged from 71% (EMTs) to 98% (nurses/physicians).

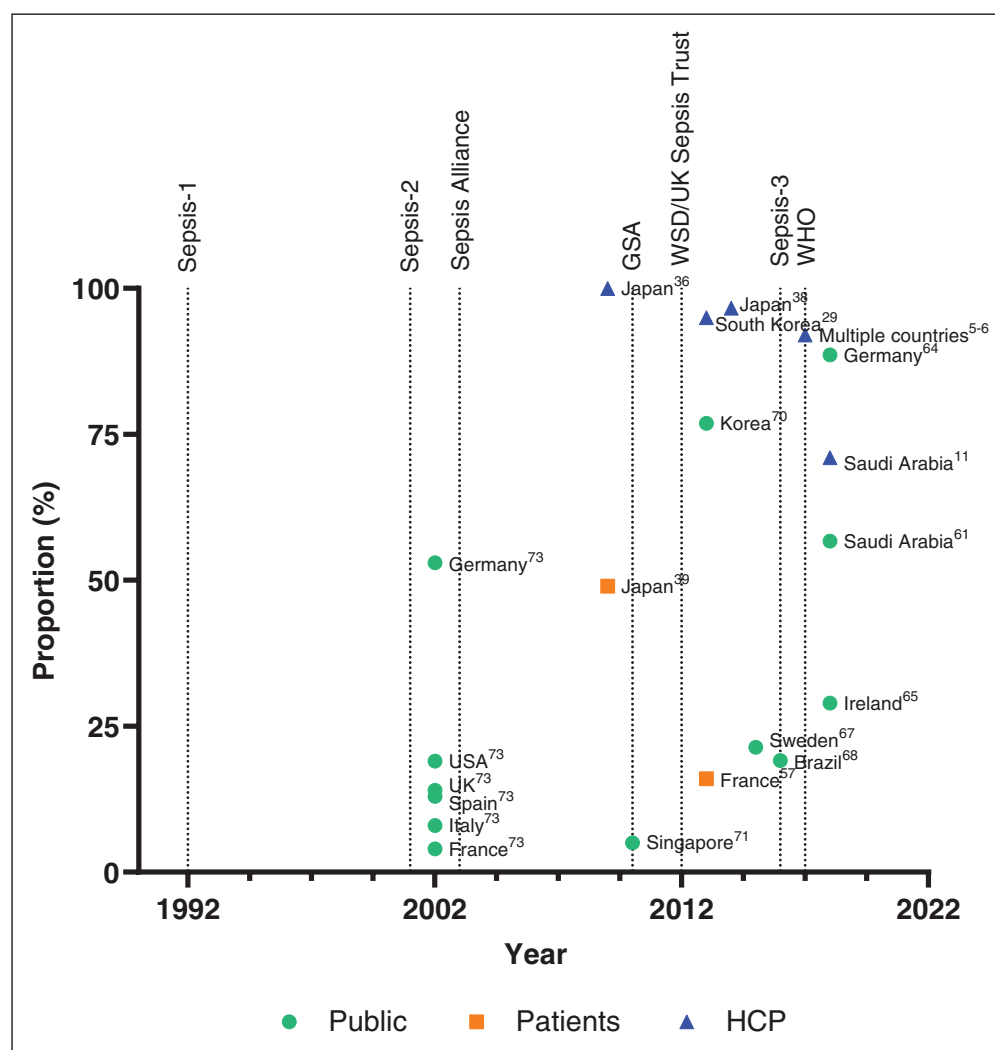


Figure 1. Patient, public, and healthcare professional awareness of sepsis over time and in relation to changing international consensus-based sepsis definitions (Sepsis-1 [1992], Sepsis-2 [2001], Sepsis-3 [2016]), formation of three key public awareness organizations (Sepsis Alliance [2003], Global Sepsis Alliance [GSA, 2010], and the U.K. Sepsis Trust [2012]), the first World Sepsis Day (WSD) in 2012, and the World Health Organization (WHO) Resolution WHA70.7 on improving the prevention, diagnosis, and clinical management of sepsis (2017). Each stakeholder group is indicated by a different colored shape (patients: orange square, public: green circle, and healthcare professionals [HCPs] blue triangle). The references for the data points are shown as superscript numbers (see reference list in Appendix 2, Supplementary Digital Content, <http://links.lww.com/CCM/H126>).

Sepsis Knowledge

Most studies evaluated sepsis knowledge ($n = 51/80$; 63.7%), including patient, public, or HCP knowledge of the definition of sepsis ($n = 30/51$; 58.8%), sepsis signs/symptoms ($n = 34/51$; 66.7%), mortality ($n = 7/51$; 13.7%), and risk factors ($n = 8/51$;

15.7%). The sepsis knowledge survey developed by the European Society of Intensive Care Medicine (ESICM) and Society of Critical Care Medicine (SCCM) was most frequently used to evaluate patient or public sepsis knowledge. The survey by Robson et al (29) was most frequently used to evaluate HCP sepsis knowledge.

Definition of Sepsis

Thirty studies ($n = 30/80$; 37.5%) reported on patient ($n = 3/30$; 10%), public (7/30; 23.3%), or HCP (21/30; 70%) knowledge of the definition of sepsis. One study included patients and HCPs (26). The proportions of patients/public who “correctly” selected the study-identified definition of sepsis ranged from 4.2% (Singapore) to 92% (Sweden) (Fig. 2). In comparison, there was a higher proportion of HCPs who could correctly identify the definition of sepsis, which ranged

from 17% (EMTs) to 91% (nurses). As demonstrated in Table 1, sepsis definitions in the included studies show important yet slight variation in interpretation and description. Although most of these definitions are different, some have overlapping elements. For example, the two definitions “sepsis is evidence of organ dysfunction caused by a dysregulated host response to infection” and “presence of life-threatening organic dysfunction secondary to the body’s unregulated response to infection” have overlapping elements of organ dysfunction and infection. This emphasizes the importance of a global definition for sepsis.

Signs/Symptoms of Sepsis

A total of 33 studies ($n = 33/80$; 41.2%) evaluated patient ($n = 2/33$; 6.1%), public ($n = 5/33$; 15.2%), or HCP ($n = 27/33$; 81.8%) knowledge of the signs/symptoms

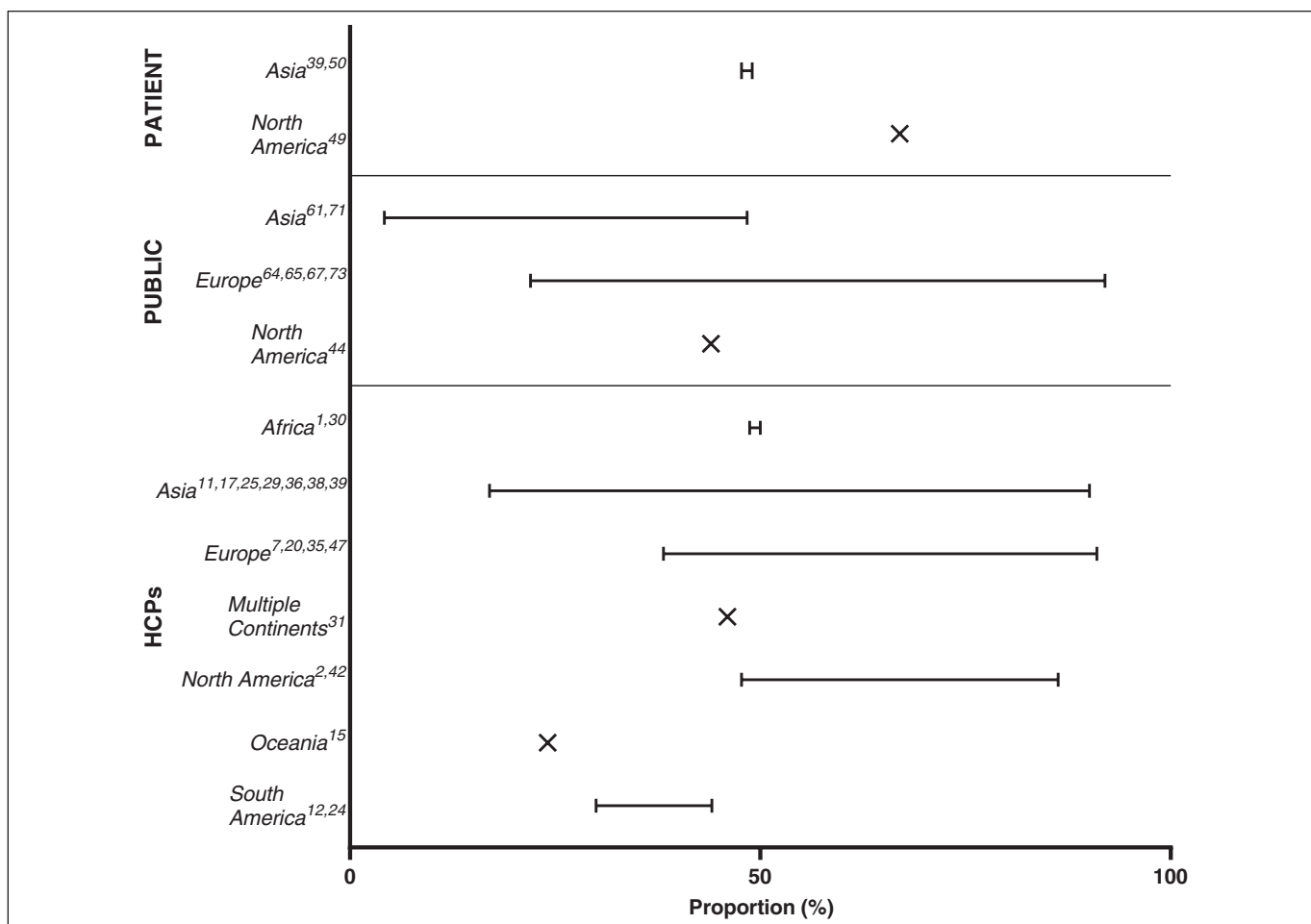


Figure 2. Patient, public, and healthcare professional (HCP) knowledge of the (study-defined) definition of sepsis. The data are displayed as individual proportions (X, where one study reported a proportion) or ranges in proportions (i.e., when multiple studies conducted in the same continent reported proportions). The references for the data points are shown as superscript numbers (see reference list in Appendix 2, Supplementary Digital Content, <http://links.lww.com/CCM/H126>).

TABLE 1.
Variety of Definitions of Sepsis in Included Studies That Reported a Definition

Sepsis Definition	Population		Healthcare Professional	Reference(s) ^a
	Patient	Public		
Sepsis is evidence of organ dysfunction caused by a dysregulated host response to infection	–	–	3	(1, 12, 15, 20, 24)
Presence of life-threatening organic dysfunction secondary to the body's unregulated response to infection	–	–	2	(12, 24)
Systemic inflammatory response caused by microbial infection	–	2	3	(11, 29, 31, 35, 36, 42, 61, 70)
The presence of a known or suspected infection, accompanied by an inflammatory response	–	–	3	(35, 36, 42)
The response of the body to infection ^b	1	1	2	(38, 39, 71)
Sepsis is an intense immune response of the body	–	1	–	(64)
Blood poisoning	–	4	–	(65, 67, 71, 73)
Blood infection	–	3	–	(1, 65, 67, 71)
Septic shock or leads to septic shock	–	3	–	(1, 65, 71, 73)
Septicemia	–	3	–	(1, 65, 71, 73)
Infection of a wound	–	1	–	(71, 73)
Infection (unspecified)	–	1	–	73
Infection of body tissue	–	1	–	71
Pus or pus in the body	–	1	–	71

^aThe reference numbers for each definition of sepsis correspond with the reference list in Appendix 2 (<http://links.lww.com/CCM/H126>).

^bShime (39 [Appendix 2, <http://links.lww.com/CCM/H126>]) included patients and healthcare professionals. Dashes indicate no data was reported for the row item.

of sepsis. Studies evaluated one or more of the same core list (lay/alternative terms used in brackets): fever (or temperature > 38°C), hypothermia (or temperature < 36°C), tachypnea (shortness of breath), tachycardia (high heart rate), hypotension (low blood pressure), and altered state of consciousness (altered mentation/disorientation/confusion). Two studies conducted before release of the Third International Consensus Definition Sepsis-3 (1) included leukocytosis or leukopenia and decreased blood sugar. Only knowledge of fever as a sign/symptom of sepsis was evaluated in patient-focused studies wherein all core signs/symptoms (except hypothermia) were evaluated for public-focused studies. The ranges in the proportion of patients, public, or HCPs who correctly identified (per each study's definition) any signs/symptoms of sepsis are displayed in **Figure 3**.

Risk and Risk Factors

Seven ($n = 12/80$; 15%) studies asked members of the public ($n = 5/12$; 41.7%) or HCPs ($n = 7/12$; 58.3%)

about sepsis-related mortality. Overall, public knowledge of current estimates of sepsis-related mortality was limited, with most participants (58%) selecting “Do not know” when asked if they know how many people around the world died of sepsis each day, or ranking sepsis mortality below other well-known diseases estimated to have a lower mortality than sepsis. In contrast, HCPs recognized sepsis as a leading cause of mortality and ranked sepsis as having a greater mortality than other well-known diseases, although were unaware the estimated mortality rate was so high.

Seven ($n = 7/80$; 8.7%) studies reported on patient ($n = 1/7$; 14.3%), public ($n = 2/7$; 28.6%), or HCP ($n = 4/7$; 57.1%) knowledge of risk factors of sepsis. Most studies ($n = 5/7$; 71.4%) did not describe how they identified accepted risk factors; two cited relevant literature on sepsis risk factors. Risk factors varied across studies, with some studies only reporting the overall proportion of “correctly” identified risk factors (i.e., not reporting individual risk factors). In the patients/public studies, participants were asked if any

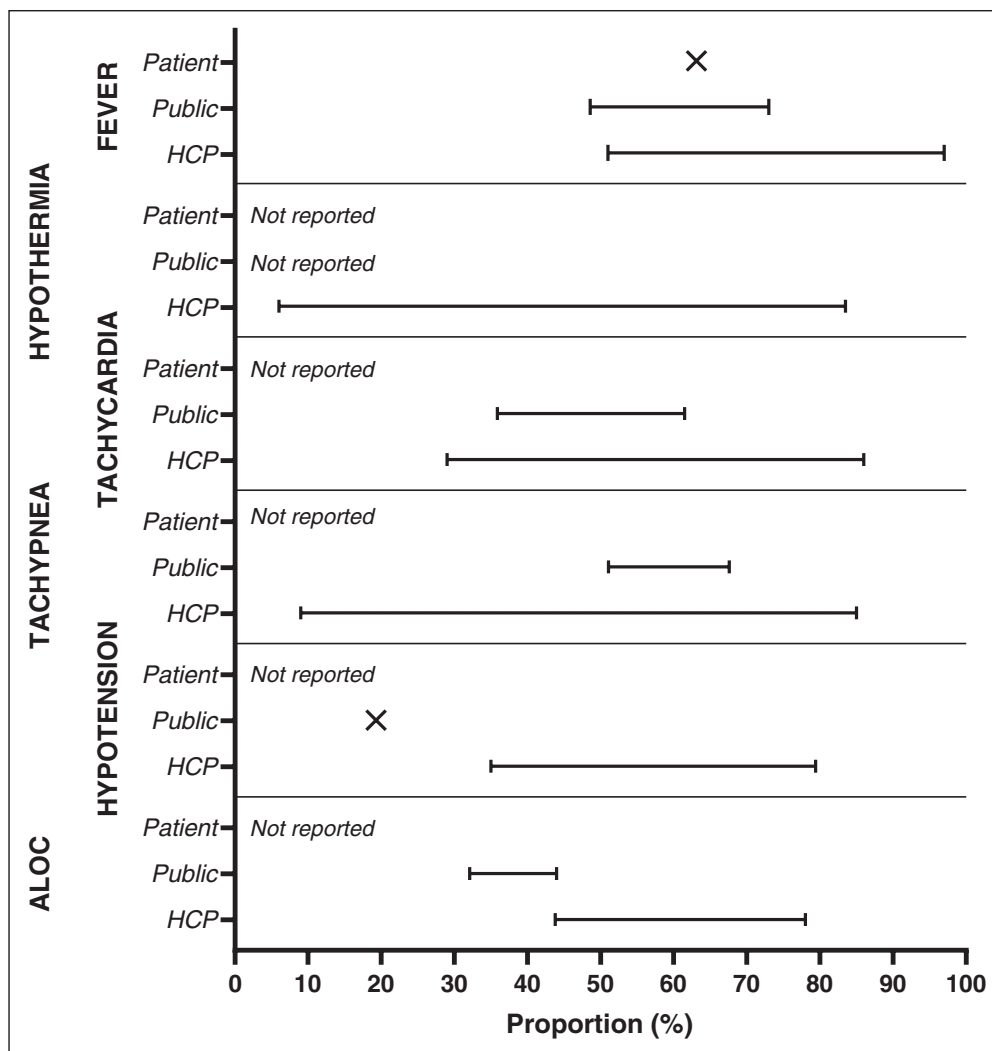


Figure 3. Patient, public, and healthcare professional (HCP) knowledge of the symptoms of sepsis. The data are displayed as individual proportions (X, where one study reported a proportion) or ranges in proportions (i.e., when multiple studies conducted in the same continent reported proportions). The data sources are referenced in Appendix 2 (<http://links.lww.com/CCM/H126>) for patient (50), public (61, 64), and healthcare professional (1, 11, 22, 29, 31, 35, 38, 40, 41) knowledge of the symptoms of sepsis. ALOC = altered level of consciousness.

of the following were risk factors for sepsis (proportion identified in the study as “correct” responses): low immunity (82.9%), burns/injuries (47.3%), diabetes (37.4%), tubes/catheters (62.8%), and risk factors specific to neonatal (premature rupture of membrane [50%]) or puerperal sepsis (caesarean section [26.5%], multiple vaginal examination [48.2%], home delivery [86%]). Knowledge of all sepsis risk factors was low, with one study reporting that only 12.6% of participants were able to select all the correct risk factors (as identified by study authors). HCPs were asked if any of the following were risk factors (proportion correctly identified): being elderly (78.8%), chronic steroid user (73.9%), IV drug user (73%), asplenia (56%), or

chronic obstructive pulmonary disease (50.6%).

Education

Twenty-two studies ($n = 22/80$; 27.5%) conducted from 2006 to 2019 described or evaluated an education intervention for patients ($n = 8/22$; 36.4%), the public ($n = 2/22$; 9.1%), or HCPs ($n = 13/22$; 59.1%) that aimed to improve their sepsis awareness or knowledge. One reported on both patient and HCP education. Patient sepsis education was mostly provided via sepsis print materials (e.g., posters, pamphlets) ($n = 4/8$; 50%), delivered face-to-face ($n = 3/8$; 37.5%), or using digital animation ($n = 1/8$; 12.5%). Public sepsis education was predominately through sepsis websites. Most general sepsis education provided to HCPs was in-person ($n = 7/13$; 53.8%) or via sepsis education print materials ($n = 4/13$; 30.8%). Three

of the sepsis education interventions ($n = 3/13$; 23.1%) were multimodal. For example, the Global Maternal Sepsis Study STOP SEPSIS! Campaign included a website, print materials, press releases, and social media. Generally, sepsis education improved patient, public, and HCP’s knowledge of sepsis (**Supplementary Table 3**, Supplementary Digital Content, <http://links.lww.com/CCM/H126>).

Sepsis Information Sources

Ten studies ($n = 10/80$; 12.5%) reported on sources of sepsis information for patients ($n = 4/10$; 40%), public ($n = 4/10$; 40%), or HCPs ($n = 3/10$; 30%)

(Table 2). One study reported on patients and HCPs. Most patients reported getting their information from hospital/medical personnel (1–36%) or newspapers (26%). Most public reported they got their information from the media (not specified) (12–72.3%), the internet (0–72.3%), or from school (1–37.5%). HCPs received their sepsis information from their profession (71.6%) or from school (24.6–56%).

Sepsis Information Seeking

Eight studies ($n = 8/80$; 10%) reported on sepsis information-seeking behavior based on news articles or internet searches. Two studies by Rush et al ($n = 2/8$; 25%) searched U.K. newspapers to identify articles that mentioned sepsis-related terms. They found that the frequency of news articles reporting on sepsis increased over time and attributed this to the increased reporting following the highly publicized death of William Mead (12-mo-old who died from sepsis in 2014) and the Daily Mail's "End the Sepsis Scandal" campaign.

Of the eight studies that reported on sepsis information-seeking behavior, four ($n = 4/8$; 50%) evaluated Google Trends and Wikipedia usage data to describe sepsis information-seeking online. Like the studies by Rush et al, the relative search volume on sepsis increased over time, with an increase associated with awareness events and news media coverage (e.g., high-profile deaths, healthcare system failures) and, less commonly, awareness campaigns (e.g., World Sepsis Day). Although, one study reported a relative increase in digital information-seeking associated with the inception of World Sepsis Day (2012), when compared with prior

to World Sepsis Day (2007–2011). When evaluating the search volume or sepsis-related searches, the top search terms included sepsis meaning, sepsis guidelines, what is sepsis, sepsis disease, and "sepsis ICD 10" (*International Classification of Diseases*, 10th revision). Most patients and families used Wikipedia, health websites, medical dictionaries, or discussion forums. The main reasons patients and families searched for health information on the internet were to learn about sepsis, and/or about treatments, to ask questions to physicians or because they never heard of sepsis.

DISCUSSION

This scoping review identified 80 studies that reported on patient, public, or HCP sepsis awareness, general knowledge, and information-seeking behaviors. Overall, data from the studies demonstrated that the public's sepsis knowledge were generally low but appeared to be slowly improving over time. There was a range over time and country in the proportions of people who had heard the term sepsis, could identify sepsis definitions, or knew the core signs/symptoms of sepsis. This general lack of understanding of sepsis is disproportionate to the substantial mortality rate of sepsis worldwide. Furthermore, the complexities of sepsis recognition are demonstrated in the variety of definitions present in the sepsis knowledge-related literature.

Existing literature demonstrates that HCPs know more about sepsis than patients and the public, although generally prehospital personnel (e.g., EMTs) knowledge was lower than in-hospital personnel (e.g.,

TABLE 2.
Range of Proportions of Patient, Public, or Healthcare Professional Sources Sepsis Information

	Source of Sepsis Information							
	Media	Newspapers	Internet	Friends/ Family	Health-Related Occupation	School	Hospital or Medical Personnel	Friends/Relatives Have Been Affected
Patients, %	7–22	26	2	2	3	1	1–36	0–1
Public, %	12–72.3	22.5	0–72.3	3–20.8	1–23	1–37.5	4.7–13	0–7.6
Healthcare professionals, %	0.5	0	1.6	1	71.6	2.9–34.9	1	0–1.6

nurses/physicians). The need to enhance patient and public knowledge of sepsis by empowering individuals to recognize signs/symptoms of sepsis and urgently seek medical care has been touted as a key means to lower sepsis morbidity and mortality (8, 30). Other mass media health promotion campaigns—such as acute myocardial infarctions and stroke (31, 32)—were credited with successfully increasing public awareness of signs/symptoms which, in turn, was associated with a reduction in both the number of patients who presented late to the hospital and who died (33, 34). However, the effectiveness of public health campaigns in terms of behavior change is often challenged by factors that either directly (e.g., exposure to message) or indirectly (e.g., perception of seriousness) impact knowledge acquisition (34, 35).

Our study highlighted additional challenges that should be considered with any sepsis awareness campaign. First, although efforts to monitor progress in public, patient, and healthcare provider awareness over time would benefit from using consistent definitions and survey tools, the evolving nature of sepsis research and current understanding continues to challenge uniform metrics, including determinations of “correct” answers on knowledge-based evaluations. We identified studies with sepsis definitions that included systemic inflammatory response syndrome (SIRS) (16, 27) and Sepsis-3 which does not include the SIRS concept. This was expected given the evolution of the definition of sepsis over time (28). There lacks global consensus on a sepsis definition, which may resolve with further understanding of the pathophysiology of sepsis, inclusion of data from adults from other geographical regions (e.g., developing nations) (36), and engagement of a more diverse panel of stakeholders when updating the definition of sepsis (37). To encompass evolving knowledge, existing surveys like the ESICM/SCCM survey could be adapted. For example, the question asking respondents to choose among several potential sepsis definitions could add options inclusive of organ dysfunction. This would allow researchers to compare current data with previous surveys and provide insight on outcomes of sepsis campaigns undertaken since the last definition update.

Second, included studies demonstrated how symptoms of sepsis can be explained without the use of medical jargon. Although included studies evaluated patient and public knowledge of symptoms of sepsis,

most evaluated knowledge of individual symptoms which, on their own, are nonspecific and could be attributed to sepsis as well as other medical conditions. To ensure clear guidance, good practice for awareness campaigns should include communicating all possible symptoms of sepsis with messaging that if a person is exhibiting a combination of these symptoms, they should seek urgent medical care. This is demonstrated on the Sepsis Alliance’s webpage (38). Their “It’s About TIME” memory aid (Temperature, Infection, Mental decline, and Extremely ill) includes the detail “if you experience a combination of these symptoms.” Third, as the current study shows, patient/public sepsis awareness varies across countries, which suggests that local data are important for targeted awareness campaigns that address local knowledge gaps.

In our study, media and internet were cited as the predominant source of sepsis information for the public. As such, awareness campaigns should use this modality. However, tools such as the Patient Education Materials Assessment Tool (34, 40) or Health on the Net criteria should be applied to assess the quality of content (understandability/actionability/readability) (41, 42). Furthermore, members of the public are more likely to look for sepsis-related information when high-profile sepsis-related stories (e.g., celebrity deaths or healthcare system errors) are published. This is an opportunity to raise sepsis awareness wherein information about sepsis risk factors, signs/symptoms, and mortality can be embedded in sepsis-related news stories. Similarly, storytelling, used in other health awareness campaigns (43), could be a key strategy used to raise sepsis awareness campaigns. Awareness campaigns should be prefaced with collecting local data to create content representative of the local public’s knowledge gaps and preferences for receipt of sepsis information. Our review found that sepsis education improves patient, public, and HCP’s knowledge of sepsis. Future research is needed to understand the effect that sepsis awareness campaigns have on public sepsis knowledge and awareness, sepsis-related morbidity/mortality, and the receptivity of HCPs when patients present to the emergency department urgent medical care. Possible studies could be similar to those conducted to evaluate effectiveness of myocardial awareness and stroke campaigns (31, 32, 34, 35, 44, 45). This may include measuring campaign recall (e.g.,

ability to define sepsis or identify symptoms of sepsis), impacts to self-efficacy, and health service use.

A major strength of our study is the rigorous conduct of the scoping review, which included a preregistered protocol, use of a methodological framework, and reporting according to PRISMA-ScR. No restrictions were placed on language, and we were able to capture literature on sepsis awareness and general knowledge from various countries. As with all scoping reviews there are limitations to consider. It is possible some studies were missed in the search. However, we searched all reference lists to ensure we did not miss any key articles. To ensure our search was feasible and included general sepsis knowledge, we used general MeSH terms and keywords for sepsis (i.e., not medical terms), and as such, it is possible that HCP general sepsis knowledge papers were missed. This means articles evaluating sepsis awareness in some HCP groups were limited (i.e., pre-hospital or outpatient HCP); interpretation of sepsis awareness in these populations requires further study. Most of the questionnaires used to evaluate patient, public, or HCP knowledge of sepsis were multiple choices, and as such, the estimates of “correct” (as each study identified) could be higher due to chance. Furthermore, not all studies used the same measure or applied the same question and response options, and as such, it is difficult to draw global comparisons regarding sepsis awareness and knowledge. However, most public-focused surveys used similar questions. Last, included studies were cross-sectional and did not evaluate levels of sepsis awareness over time. Future research could include a contemporary global survey of sepsis knowledge for patients, public, and HCPs, which could be applied across different countries and settings and at different time points.

CONCLUSIONS

We found that although public knowledge of sepsis and its mortality is generally low, some countries have high awareness and knowledge, and as such, any public awareness campaigns should be created based on local data. This will also support tailoring campaign sources, modes, and materials to maximize uptake. Future research should include a consistent definition of sepsis and a complete understanding of the impacts of changing sepsis awareness on sepsis-related morbidity and mortality.

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- 1 Department of Critical Care Medicine, Alberta Health Services & University of Calgary, Calgary, AB, Canada.
- 2 Department of Community Health Sciences & O'Brien Institute for Public Health, University of Calgary, Calgary, AB, Canada.
- 3 Department of Psychiatry & Hotchkiss Brain Institute, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada.
- 4 Department of Medicine, McMaster University Faculty of Health Sciences, Hamilton, ON, Canada.
- 5 Faculty of Medicine and Health Sciences, Department of Medicine, Université de Sherbrooke, Sherbrooke, QC, Canada.
- 6 Faculty of Health, School of Health Administration, Dalhousie University, Halifax, NS, Canada.

Sepsis Canada is a research network made up of researchers, health care providers, trainees and patient partners from across Canada, with a wide range of expertise and experience. Together, our members work together to improve the awareness, care and recovery from sepsis for all Canadians. The Executive Committee includes Dr. Alison Fox-Robichaud (Scientific Director). The Steering Committee includes Dr. Alix Carter (Dalhousie University), Dr. Deborah Cook (McMaster University), Dr. Brian Cuthbertson (University of Toronto), Dr. Kirsten Fiest (University of Calgary), Dr. Robert Fowler (University of Toronto), Dr. Alison Fox-Robichaud (McMaster University), Dr. Allan Garland (University of Manitoba), Dr. Hertzgerstein (McMaster University), Dr. Michelle Kho (McMaster University), Dr. (Tex) Niranjan Kissoon (University of British Columbia), Dr. Paul Kubes (University of Calgary), Dr. Manoj Lalu (University of Ottawa), Dr. François Lamontagne (University of Sherbrooke), Dr. Kusum Menon (University of Ottawa), Dr. Jeanna Parsons Leigh (Dalhousie University), Dr. Elizabeth Wilcox (University of Toronto), and Ariana Parolini, Kristine Russell, and Nubia Zepeda (University of Calgary).

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For information regarding this article, E-mail: kmfiest@ucalgary.ca

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