Setting up a domestic violence telephone helpline for general practitioners in Australia: What exists and what works?

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Background

Domestic violence is a global health issue. The World Health Organization (WHO) recommends training health professionals to respond appropriately to victims of domestic violence. Despite those who experience domestic violence attending general practice, general practitioners (GPs) receive little training in managing this issue. Helplines predominantly exist to support the general public and patients; however, few exist for GPs, and there are none regarding domestic violence.

Objective

This article explores how helplines can support GPs in the management of patients who have experienced domestic violence.

Method

A scoping review of helplines targeting GPs was used in this study.

Results

Few helplines target health professionals and limited evaluations on these helplines have been undertaken. Health professional helplines cover broad specialist fields, and health professionals value access to specialists. Helplines are educational and increase the confidence of health professionals in providing quality patient care. Key challenges include helpline awareness and timely support.

Discussion

Developing a domestic violence helpline for GPs is unexplored, but there is potential for education and improved response to patients. Helpline workers need tailored training to respond to health professionals' complex, specialist needs. These helplines need extensive marketing to ensure uptake and funding.

Domestic violence[1] is an internationally recognised global health issue[2] that Australia has prioritised.[3] The prevalence of domestic violence in Australia is alarming – 17% of women and 5.3% of men have experienced partner violence since the age of 15 years,[4] and one woman a week, on average, has been killed.[5] Domestic violence is associated with several health issues, including mental health disorders, chronic pain and irritable bowel syndrome.[6] General practice is often the first port of call for women who experience domestic violence; general practitioners (GPs) can see up to five of these women a week.[7]

The World Health Organization (WHO) has found that domestic violence training for health professionals is scarce. The WHO recommends that training should go beyond identifying victims of domestic violence to providing appropriate responses and referrals to existing services for ongoing support.[6] In Australia, however, such training in medical schools is rare[8] and GPs must proactively enrol in additional education to fill knowledge gaps. Such education is provided by The Royal Australian College of General Practitioners (RACGP) through the *Abuse and violence: Working with our patients in general practice* (the White Book)[9] publication and *gplearning* online active learning modules. Primary Health Networks (formerly Medicare Locals) also facilitate training for local practices.

Telephone information and support lines (helplines) exist throughout the healthcare field. Such helplines can be relatively cheap to operate, easily accessible and are run by paid professionals or volunteers. They exist predominantly for patients, carers and the general public. One of the largest, most well-known helplines is the nurse-led NHS Direct in the UK (replaced by NHS-111 in 2014). The Australian equivalent is healthdirect, which provides patients with access to GPs via telephone out of hours on weekdays, and on weekends and public holidays. Other helplines exist for broad areas of health such as smoking and

alcohol quit lines, cancer care, and human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS).

There are several domestic violence helplines in Australia and internationally. The Australian helplines are provided either nationally, such as 1800RESPECT, or are state-based or territory-based. Their primary target population is victims of abuse, but they may also provide support to friends, families or carers. There is no helpline solely dedicated to GPs or other health professionals whose patients may be experiencing domestic violence. However, 1800RESPECT and the Men's Referral Service encourage professionals to contact them for support. Overseas domestic violence helplines are similar, their target population being those who have experienced domestic violence. However, the UK National Domestic Violence Freephone Helpline and SupportLine, and US national Love is Respect (a dedicated service for young people) and state-based Women Helping Battered Women helplines are also available to professionals.

While there is no dedicated domestic violence helpline for GPs or other health professionals, there are several helplines in Australia and internationally that seek to support health professionals in other areas of patient care. The majority of these helplines in Australia are state-based or territory-based. They cover a wide range of health-related issues and advertise themselves as covering areas such as care management strategies, referral pathways, risk assessment, education, treatment options, medical issues and guidance on conversations with patients.

The aim of this paper is to report on a scoping review undertaken to see what helplines exist for GPs, and what evaluations have been done to explore the unique challenges and opportunities that may exist in their successful delivery. The research question used to frame the review was: 'How can a telephone information and support line best support and respond to general practitioners?' The review will provide background to underpin consultative stages in the development of a helpline to support GPs in their work with patients experiencing domestic violence.

Methods

We followed Arksey and O'Malley's five-stage scoping review methodological framework, as refined by Levac et al.[10,11] After identifying our research question, we identified relevant studies by searching electronic databases, reference lists and existing networks. We searched Medline, Pubmed, Cinahl and PyscINFO using terms relating to a telephone helpline (Table 1) and evaluation in varying combinations. The year of publication was not restricted. As there is a paucity of helplines targeting GPs, and differing terms used in Australian and international academic literature, we searched for helplines supporting a range of health professionals. We will refer to health professionals in this review unless GPs are specifically referenced. We then searched reference lists for any additional relevant papers. We also consulted with existing networks to identity any further studies of Australian-based helplines undertaken in relevant healthcare fields (eg mental health).

We selected studies based on specified inclusion criteria. Evaluations were included if the studies were published in English and were of a telephone line that targets health professionals or that health professionals can contact. Details of the study population and type are shown in Table 1. Evaluations that solely targeted non-health professionals were excluded.

While we only reviewed telephone helplines, we realise that alternative technological pathways to information and support exist. The Dutch AIDS and Sexually Transmitted Infection public helpline provides email access,[12] whereas the Rape, Abuse and Incest National Network (RAINN), the national sexual assault helpline in the US, has an online support facility.[13,14] Despite this, a telephone is still the most accessible and broadly accepted form of communication and remained the focus of this review. We charted key items of information from the selected studies, including the type of helpline, target population, evaluation methods and results. We then undertook a qualitative content analysis.

Results

Thirty-nine papers were found and 21 were deemed eligible for review. Of those excluded, the majority reported evaluations of helplines that solely targeted non-health professionals, were not telephone helplines, and where the focus was not the helpline itself (eg one paper reported on an evaluation of an educational program for telephone advisors). An additional six papers were found through reference list searches of eligible papers. A total of 27 papers (Appendix 1, available online only) were deemed eligible for inclusion in this review.

Table 1. Search terms and inclusion criteria

Telephone line	Study population	Study type (evaluation)
Hotline Helpline Support line Liaison line Warmline Advisory service Consultation-liaison	Health professional (eg primary care, physician, nurses, health worker, psych, allied health, general practitioner)	Randomised controlled trial Cross-sectional Before and after studies Audits Qualitative/quantitative

Target populations

The majority of published papers evaluating helplines are those targeting patients or the general public. There were some evaluations of helplines that health professionals accessed, even though they were not the primary population.[15–23] There were three exceptions:

- a Ugandan warmline that supports antiretroviral therapy program, where the majority of callers were field staff and peer health workers (69%; n = 501)[24]
- the US National Immunization Information Hotline, which reported that one-third of all callers were health professionals (34%; n = 11,868)[25]
- rheumatology helplines across several hospital sites, which are aimed at health professionals and patients. Health professionals formed 21% (n = 112) of callers responding to a survey.[26]

There were few published evaluations of helplines solely targeting health professionals.[27–38] With the exception of the Ugandan warmline,[24] health professional callers accounted for less than 20% of calls.[15,19,20,24,39] Both the helplines and studies that evaluated them suggest health professionals are often secondary to the patients or general public.[15–18,21,22,39] However, Jefford et al[22] concluded that considering the number of calls made by health professionals, more research needs to be done to understand their needs.

The topic areas of the helplines were broad (Table 2) and the type of health professional callers was not always specifically identified, either because of data collection methods or limited reporting of results. However, some evaluations did specify that the helpline was targeted at or accessed by GPs.[15,19,20,27,32–34,38]

Seeking information and advice

The reasons for health professionals accessing helplines vary depending on the service provision marketed. However, calls were predominantly made to seek general or specialist information, or advice regarding specific patients.[15,17,24,28,32–35,37,38] Health professionals value the opportunity to speak to a specialist about a specific patient during a consultation, requiring immediate accessibility.[38] Such advice ranged across care or treatment logistics[28] and information materials or services available.[22] Broader questions, not patient-specific, were also asked (eg regarding HIV or cancer care generally).[20,21,24,28,33,34,36,39]

Complexity

Several evaluations found that health professionals could ask about multiple issues that were broad in scope during one call.[16,20,27] Queries across helplines for palliative, cancer and rheumatology care were as wide-ranging as psychological, social, organisational and patient management.[20,22,26,27,39] Health professionals seek expert advice in complex cases, particularly in areas such as mental health.[33,35,38]

Educational opportunities

Some evaluations found that the helplines offered, and should offer, more than information and referral. The purpose of Counselling and Diagnosis in Dementia (CANDID), a telemedicine service supporting the care of young patients with dementia, was that it should be 'more than a simple source of information … that it should have the ability to influence and alter the care and management' of patients. The service also aimed to provide a 'holistic approach, liaising with professionals and family members, providing advice on the practice, social and legal issues of these diseases as well as the medical aspects'.[19]

Evaluation of the Cancer Information Service in the US found that helplines could be used proactively to disseminate information on prevention and control, and assist callers to overcome barriers to action.[39] GPs who used a mental health helpline in South Australia that gave them access to psychiatrists found that the advice they received increased their knowledge of mental health, relevant services and confidence in managing patients.[33] Helplines also had educational potential[32,33,40,41] or highlighted knowledge gaps.[31] Furthermore, advice received was used in subsequesnt situations that were similar, suggesting ongoing education.[28,33,34] The potential usefulness of helplines for health professionals is enhanced if they form part of a coordinated program that also provides training and peer support.[29,32]

Opportunities for health professionals: Confident provision of quality care

Evaluations suggested that as advice given to health professionals was often followed,[27,33,34] there was a potential for improved quality of care.[24,27,28,35,37] A helpline could also enable a health professional to feel assured of their patient management skills when faced with a difficult clinical situation.[39] Helplines appeared to meet the consultation needs of health professionals[28,33,35] and made their jobs somewhat easier.[24] A helpline run by health professionals for health professionals can also lead to additional problems being revealed that were not necessarily the

Table 2. Topics covered by helplines for health professionals

Topics	References
AIDS/HIV	16, 24, 28, 31
Drug and alcohol	21, 23, 34, 36
Cancer	17, 22, 39
Palliative care	15, 27, 35
Rheumatology	20, 26
Infectious disease	40, 41
Mental health	33, 38
Multiple sclerosis (MS)	18
Youth dementia	19
Antibiotic treatment	29
Geriatric care	32
Perinatal HIV care	37
Immunisation	25

initial focus of the call. One evaluation showed the importance of a helpline's potential for exchange of thought.[27]

Barriers and challenges to a successful helpline for health professionals

While some health professionals expressed a need for helplines,[25,38] there were some key barriers and challenges in providing a successful helpline. The biggest issues related to awareness of the helpline and timely availability of advice. Evaluations also reported slow uptake[33,38] or low levels of ongoing use. An evaluation of a pilot psychiatric telephone advice line in New South Wales found a slow uptake by GPs.[38] Despite low levels of use, GPs who responded to the post-pilot survey said they wanted the service to continue. Interestingly, neither those who used the service (71%; n = 5) nor those who had not used it (86%; n = 42) had knowledge of a national helpline (GP-Psych Support), run by the RACGP. This RACGP helpline was similar to the pilot, but no evaluation had been published and it was discontinued in 2014.

The evaluation of CANDID, a service available to patients, their families and health professionals, identified a less than anticipated use by health professionals, suggesting that greater promotion of the service is required.[19] Antibiotel, a helpline for advice on antibiotic treatment as part of the Antibiolar Lorraine antibiology network in France, also experienced low levels of usage.[29] A helpline that provides support for nurses and GPs of a hospital and rest home for aged care experienced low levels of use, potentially because the nurses opted to seek advice from more senior staff and the GPs were able to frequently access a geriatrician face to face. However, senior staff members did use the helpline and saw it as 'back up'.[32] Sometimes, health professionals were not aware of the service at all,[28] used alternative resources,[34] or did not see the helpline as a legitimate resource.[30] Promotion was found to be vital for uptake,[19,24,34] with usage potentially dependant on media attention.[41]

Non-timely availability of advice was usually a result of intermediaries taking the initial call or callers having to leave messages on answering machines, and delays in referring to and receiving call-backs from specialists.[24,28,34] GPs preferred instant access to a specialist, with the patient still in the consulting room.[38] However, a broader range of health professionals found it acceptable to receive call back within one day.[26]

Another key challenge related to training helpline workers. One evaluation identified the complex role of helplines, particularly the diverse support and information often provided.[17] The needs of helpline users had to be monitored frequently and training tailored accordingly.[16,22] As such, training and the expertise of those running the helpline needed to be consistent with well-defined protocols.[20,24,30] Training may need to be intensive, particularly considering the broad range of topics covered and a general question found to be less satisfactorily answered than a specific question.[16] In some cases, a specialist answering the helpline was preferred.[26]

Discussion

Although there is no existing domestic violence helpline for health professionals, the literature reviewed showed that helplines developed to assist health professionals, directly or alongside a broader target audience, do exist in other niche fields where access to expert specialist advice is required. There is a scarcity of published research on helplines directly targeting GPs. However, there are similar components of successful helplines that target various health professionals. There are certainly some aspects of helplines targeting patients or the general public that may be relevant to a discussion on developing a helpline for the specialist area of domestic violence.

Key considerations in developing a helpline will be who should answer the helpline and what level of information or advice is required by the caller and marketed as being available. There needs to be sufficient training for all potential calls. The categories of calls can be very broad, from patient-specific advice that is required immediately to general information on the topic area. These categories can also be specific medical advice or emotional, social and psychological support. A domestic violence helpline would, no doubt, require a similarly broad level of information and advice.

With regard to helplines for callers who are not health professionals, a study that evaluated a national sexual assault online hotline found that users rated the volunteers as lacking in knowledge and skills.[13] Furthermore, where helplines target different groups (eg the general public, patients and their carers), the needs of each group are often different and responses need to be tailored accordingly.[42] Even within one health profession, the level of experience between callers may differ (eg general practice registrar and GP with decades of experience, or a more generalist GP and GP specialising in mental health). It is not known whether health professionals would prefer a locally specific helpline or one targeting health professionals nationwide. Certainly, GPs often have a network of local specialists they ring for advice. This suggests that the provision of a locally tailored support structure may be more acceptable to this target population.

With a broad range of knowledge and level of specialist skill required, training needs to be tailored to the target caller population. Reviews of helplines targeting callers who are not health professional suggest training may include the following:[43,44]

- improving knowledge and skills
- raising confidence to provide support
- increasing awareness of available tools for callers
- being explicitly informed that such support is part of the helpline's services.

Training can be in the form of case scripts, but they must show an accurate portrayal of the type of problems helplines support.[45]

Helplines can be used as educational tools and provide care beyond the immediate topic area. Using a helpline as an educational tool for the dissemination of health education and promoting health behaviour change has been cited as a 'promising strategy' for the general public and patients.[46] A study evaluating the effectiveness of helpline services for victims of domestic violence in the US showed, *inter alia*, that these services provided additional information. This study suggested that it was not just information about domestic violence that callers received when accessing services, but issues as wide-ranging as homelessness and poverty.[47] A helpline has the opportunity to educate health professionals about domestic violence and the broader implications for their patients.

Aggressively marketing a helpline to health professionals, particularly GPs, is crucial. Even with extensive research and planning, helplines may not be successful in terms of usage rates. One study on smoking cessation for patients suggested that 1–2% of targeted population is a reasonable expectation for participation rates.[48] The GP-Psych Support helpline was discontinued because of a lack of funding. In a letter to the editor, Bradstock et al commented that GPs had been satisfied using the service, that it had increased GPs knowledge, and they would consider using it again.[49]

The issue of a lack of funding was raised by Fountain-Polley et al regarding a paediatric rheumatology helpline for families and health professionals.[50] The challenges for specialists providing helplines are ensuring sufficient recognition for the significant workload involved, and that the service being used is valued in order to secure funding.[50]

One of the key limitations of the papers reviewed was a lack of quality formal evaluations. The methods used by the studies reviewed were relatively weak. There was also a lack of detailed demographics (eg gender, location, type of practice) and spectrum of the needs of health professionals. As such, the outcomes of helplines for subgroups of health professionals were often unknown. Further, a rigorous evaluation of any helpline should include an analysis of cost-effectiveness and, ideally, some measurement of how many patients were assisted by the health professional, and how much access to information and support increased.

Conclusion

There is a paucity of good-quality evaluations of helplines for health professionals. Potential exists for a helpline to support GPs in their work with patients experiencing domestic violence. However, a number of key areas need to be understood, including the specific needs of GPs. Furthermore, a helpline could contribute to the education of GPs in this complex area. However, any helpline established may require extensively tailored protocols and trained helpline workers to adequately respond to a potentially broad range of requirements from basic information and how to provide an appropriate first-line response, to referrals for housing and financial support. It is clear that a helpline would need to be comprehensively marketed to ensure sufficient uptake, not only to successfully satisfy needs, but also to secure future ongoing funding and availability.

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References

1. Hegarty K, O'Doherty L. Intimate partner violence: Identification and response in general practice. Aust Fam Physician 2011;40(11):852–56.
2. World Health Organization. Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: WHO, 2013.
3. Royal Commission into Family Violence in Victoria. Letters patent – Terms of reference. Melbourne: Royal Commission into Family Violence in Victoria, 2015.
4. Australian Bureau of Statistics. Personal safety. Canberra: ABS, 2012.
5. Mouzos J, Rushworth C. Trends and issues in crime and criminal justice – Family homicide in Australia. Canberra: Australian Institute of Criminology, 2003.
6. World Health Organization. Responding to intimate partner violence and sexual violence against women: WHO clinical and policy guidelines. Geneva: WHO, 2013.
7. Hegarty K, Bush R. Prevalence of partner abuse in women attending Australian general practice: A cross-sectional survey. Aust N Z J Public Health 2002;26(5):437–42.
8. Valpied J, Aprico K, Clewett J, Hegarty K. Are future doctors taught to respond to intimate partner violence? A study of Australian medical schools. J Interpers Violence 2015; doi:10.1177/0886260515592616
9. The Royal Australian College of General Practitioners. Abuse and violence: Working with our patients in general practice. 4th edn. East Melbourne, Vic: RACGP, 2014.
10. Arksey H, O'Malley L. Scoping studies: Towards a methodological framework. Int J Soc Res Methodol 2005;8(1):19–32.
11. Levac D, Colquhoun H, O'Brien KK. Scoping studies: Advancing the methodology. Implement Sci 2010;5:69.
12. Mevissen FE, Eiling E, Bos AE, Tempert B, Mientjes M, Schaalma HP. Evaluation of the Dutch AIDS STI information helpline: Differential outcomes of telephone versus online counseling. Patient Educ Couns 2012;88(2):218–23.
13. Finn J, Garner MD, Wilson J. Volunteer and user evaluation of the National Sexual Assault Online Hotline. Eval Program Plann 2011;34(3):266–72.
14. Finn J, Hughes P. Evaluation of the RAINN National Sexual Assault Online Hotline. J Technol Hum Serv 2008;26(2–4):203–22.
15. Campbell C, Harper A, Elliker M. Introducing 'Palcall': An innovative out-of-hours telephone service led by hospice nurses. Int J Palliat Nurs 2005;11(11):586–90.
16. Bos AER, Visser GC, Tempert BF, Schaalma HP. Evaluation of the Dutch AIDS information helpline: An investigation of information needs and satisfaction of callers. Patient Educ Couns 2004;54(2):201–06.
17. Twomey C. Telephone contacts with a cancer nurse specialist. Nurs Stand 2000;15(3):35–38.
18. Madonna MG, Keating MM. Multiple sclerosis pathways: An innovative nursing role in disease management. J Neurosci Nurs 1999;31(6):332–35.
19. Harvey R, Roques PK, Fox NC, Rossor MN. CANDID – Counselling and Diagnosis in Dementia: A national telemedicine service supporting the care of younger patients with dementia. Int J Geriatr Psychiatry 1998;13(6):381–88.
20. McCabe C, McDowell J, Cushnaghan J, et al. Rheumatology telephone helplines: An activity analysis. Rheumatology 2000;39(12):1390–95.
21. Ahacic K, Nederfeldt L, Helgason ÁR. The national alcohol helpline in Sweden: An evaluation of its first year. Subst Abuse Treat Prev Policy 2014;9:28.

22. Jefford M, Black C, Grogan S, Yeoman G, White V, Akkerman D. Information and support needs of callers to the Cancer Helpline, the Cancer Council Victoria. Eur J Cancer Care (Engl) 2005;14(2): 113–23.
23. Kim E, Sarkar M, Navioz Y, Koren G, Einarson A. The Motherisk Alcohol and Substance Use Helpline: 10 years of experience and counting. J Popul Ther Clin Pharmacol 2010;17(2):e269–80.
24. Chang LW, Kagaayi J, Nakigozi G, et al. Telecommunications and health care: An HIV/AIDS warmline for communication and consultation in Rakai, Uganda. J Int Assoc Physicians AIDS Care (Chic) 2008;7(3):130–32.
25. Gust DA, Gangarosa P, Hibbs B, et al. The National Immunization Information Hotline. J Health Commun 2004;9(4):371–79.
26. Brown SJ, McCabe CS, Hewlett S, et al. Rheumatology telephone helplines: Patient and health professionals' requirements. Musculoskeletal Care 2006;4(1):24–37.
27. van Heest F, Finlay I, Otter R, Meyboom-de Jong B. The New Millennium Palliative Care Project (2000–2003): The impact of specialised GP advisors. Br J Gen Pract 2007;57(539):494–96.
28. Karari C, Tittle R, Penner J, et al. evaluating the uptake, acceptability, and effectiveness of Uliza! clinicians' HIV hotline: A telephone consultation service in Kenya. Telemed J E Health 2011;17(6):420–26.
29. May T, Burty C, Demoré B, et al. Antibiolor, the Lorraine antibiology network: Update on 7 years of activity. Med Mal Infect 2012;42(8):355–60.
30. Gallagher TH, Munro J, Kahl LE. Development and implementation of a Clerkship Counseling Hotline. Teach Learn Med 2005;17(1):80–84.
31. Swart AM, Chisholm BS, Cohen K, Workman LJ, Cameron D, Blockman M. Analysis of queries from nurses to the South African National HIV & TB Health Care Worker Hotline. Southern African Journal of HIV Medicine 2013;14(4): 179–82.
32. Sankaran S, Kenealy T, Adair A, et al. A complex intervention to support 'rest home' care: A pilot study. N Z Med J 2010;123(1308):41–53.
33. Sved Williams A, Dodding J, Wilson I, Fuller J, Wade V. Consultation-liaison to general practitioners coming of age: The South Australian psychiatrists' experience. Australas Psychiatry 2006;14(2):206–11.
34. Crocker C, Burns FH, Saunders JB, Cairns D. Establishment and evaluation of a statewide drug and alcohol specialist advisory service. Aust N Z J Public Health 1996;20(4):428–30.
35. van Heest FB, Finlay IG, Kramer JJ, Otter R, Meyboom-de Jong B. Telephone consultations on palliative sedation therapy and euthanasia in general practice in The Netherlands in 2003: A report from inside. Fam Pract 2009;26(6): 481–87.
36. Egan JE, Casadonte P, Gartenmann T, et al. The Physician Clinical Support System-Buprenorphine (PCSS-B): A novel project to expand/improve buprenorphine treatment. J Gen Intern Med 2010;25(9):936–41.
37. Fogler JA, Weber S, Goldschmidt RH, Mahoney MR, Cohan D. Supplement: Consultation needs in perinatal HIV care: Experience of the National Perinatal HIV Consultation Service. Am J Obstet Gynecol 2007;197(3 Suppl):S137–41.
38. Sankaranarayanan A, Allanson K, Aryaa DK. What do general practitioners consider support? Findings from a local pilot initiative. Aust J Prim Health 2010;16(1):87–92.
39. Anderson DM, Duffy K, Hallett CD, Marcus AC. Cancer prevention counseling on telephone helplines. Public Health Rep 1992;107(3): 278–83.
40. Cavey AMJ, Spector JM, Ehrhardt D, et al. Mississippi's infectious disease hotline: A surveillance and education model for future disasters. Prehosp Disaster Med 2009;24(1): 11–17.
41. Tappero JW, Khan AS, Pinner RW, et al. Utility of emergency, telephone-based national surveillance for Hantavirus pulmonary syndrome. Hantavirus Task Force. JAMA 1996;275(5): 398–400.
42. Lechner L, DeVries H. The Dutch cancer information helpline: Experience and impact. Patient Educ Couns 1996;28(2):149–57.
43. Stacey D, Chambers SK, Jacobsen MJ, Dunn J. Overcoming barriers to cancer-helpline professionals providing decision support for callers: An implementation study. Oncol Nurs Forum 2008;35(6):961–69.
44. Stacey D, O'Connor AM, Graham ID, Pomey M-P. Randomized controlled trial of the effectiveness of an intervention to implement evidence-based patient decision support in a nursing call centre. J Telemed Telecare 2006;12(8):410–15.
45. Baxter D, Williams JI. An investigation into the quality of service provided by telephone hotlines for family planning services. Can J Public Health 1982;73(3):194–99.
46. Soet JE, Basch CE. The telephone as a communication medium for health education. Health Educ Behav 1997;24(6):759–72.
47. Bennett L, Riger S, Schewe P, Howard A, Wasco S. Effectiveness of hotline, advocacy, counseling, and shelter services for victims of domestic violence: A statewide evaluation. J Interpers Violence 2004;19(7):815–29.
48. Glasgow RE, Lando H, Hollis J, McRae SG, La Chance PA. A stop-smoking telephone help line that nobody called. Am J Public Health 1993;83(2):252–53.
49. Bradstock SE. Telephone-based psychiatry advice service for general practitioners. Med J Aust 2005;183(2):90.
50. Fountain-Polley S, Whitworth P, Freeman N, Davis P, Ryder C. Survey of telephone calls to a paediatric rheumatology helpline: Assessment of impact. Arch Dis Child 2009;94(12):996.

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Appendix 1. Papers included in review

Authors	Year	Helpline topic	Location	Caller population	Study aim	Study method
Ahacic et al[21]	2014	Alcohol	Sweden	People seeking support for own alcohol use, relatives and health professionals	Describe callers and characteristics of those requesting counselling	Audit
Anderson et al[39]	1992	Cancer	US	Health professionals and general public	Effects of helpline: disseminating information and referrals	Audit
Bos et al[16]	2004	AIDS	Netherlands	General public and specific occupational groups	Describe characteristics and needs of callers; caller satisfaction	Telephone survey post call
Brown et al[26]	2006	Rheumatology	UK	Patients and health professionals	Patients and health professionals requirements	Cross-sectional survey
Campbell et al[15]	2005	Palliative care	UK	Registered patients, their carers and health professionals	Results of helpline	Audit and satisfaction survey
Cavey et al[40]	2009	Infectious disease	US	Red Cross shelter workers	Report on helpline following Hurricane Katrina	Audit
Chang et al[24]	2008	AIDS/HIV	Uganda	patients, companions, family, peer health workers, field staff	Report on initial experience with helpline	Audit and survey
Crocker et al[34]	1996	Drug and alcohol	Australia	Health professionals	Whether advice prompt and reliable	Cross-sectional telephone interviews
Egan et al[36]	2010	Buprenorphine treatment	US	Physicians	Information on use of helpline	Audit
Fogler et al[37]	2007	HIV	US	Clinicians who treat HIV-infected pregnant women	Evaluate consultation needs of clinicians calling the helpline	Audit
Gallagher et al[30]	2005	Clerkship	US	3rd year students of medicine	Describe 1st year of the helpline	Cross-sectional survey and audit
Gust et al[25]	2004	Immunisation	US	Public and health professionals	Describe operations of helpline	Audit and survey
Harvey et al[19]	1998	Dementia	UK	Younger people with dementia, their families and health professionals	Audit and evaluate support service	Audit
Jefford et al[22]	2005	Cancer	Australia	Patients, friends, family, health professionals, general public, workplaces	Describe needs of callers and responses to needs	Audit
Karari et al[28]	2011	HIV	Kenya	Health professionals	Evaluate uptake, acceptability and effectiveness of the helpline	Audit, satisfaction surveys, feedback
Kim et al[23]	2010	Drug and alcohol	Canada	Pregnant and breastfeeding women and health professionals	Summary of helpline achievements	Audit

Appendix 1. Papers included in review

Authors	Year	Helpline topic	Location	Caller population	Study aim	Study method
Madonna et al[18]	1999	Multiple sclerosis	US	People with multiple sclerosis, their families and health professionals	Management of patients on interferon beta-1b therapy	Audit
May et al[29]	2012	Antibiotic treatment	France	Lorraine hospital or community physicians	Assess activity of the Antibiolor network (including helpline)	Audit and satisfaction survey.
McCabe et al[20]	2000	Rheumatology	UK	Patients, their families, carers, GPs, district and practice nurses	Compare services available in six NHS Trusts	Audit
Sankaran et al[32]	2010	Aged related residential care	New Zealand	Registered nurses and GPs in a hospital and rest home	Describe intervention and report evaluation	Audit and semi-structured interviews
Sankarana-rayanan et al[38]	2010	Mental health	Australia	GPs	Report on pilot service to support GPs in mental health care	Pre and post surveys
Swart et al[31]	2013	HIV and tuberculosis	South Africa	Health professionals	Describe queries from nurses and analyse knowledge gaps	Audit
Tappero et al[41]	1996	Hantavirus Pulmonary Syndrome	US	Health professionals, public health workers and general public	Report on utility of helpline	Audit
Twomey[17]	2000	Cancer	UK	Patients, carer/family, Macmillan nurse, health professionals	Audit telephone consultations	Audit
Van Heest et al[27]	2007	Palliative care	Netherlands	GPs	Use, problem type, advice followed, quality of care	Audit and post-call survey
Van Heest et al[35]	2009	Palliative care	Netherlands	GPs	Frequency of and how palliative sedation and euthanasia discussed	Audit
Sved Williams et al[33]	2006	Mental health	Australia	GPs	Outcomes and satisfaction with the service	Cross-sectional telephone interview