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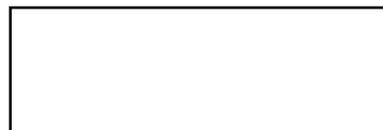
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1 **Review objective/question**

2 The objective of this scoping review is to examine the characteristics of telephone initial consultations
3 conducted in primary care settings and to map the existing evidence on the components, skills and
4 training recommended for initial telephone consultations in primary care to date.

5 This scoping review will be guided by the following questions:

- 6 • What components are included or are recommended in the literature to be included in primary
7 care initial telephone consultations?
- 8 • What skills are reported or recommended in the literature for primary care practitioners to deliver
9 initial telephone consultations?
- 10 • What training is recommended for primary care practitioners delivering initial telephone
11 consultations?

12 **Background**

13 Primary care can be defined as community-based healthcare.¹ In addition to general practitioners or
14 physicians, a number of healthcare professionals provide services in the primary care setting. Although
15 there are some regional variations, these healthcare professionals commonly include nurses, pharmacists
16 and allied health professionals including dietitians, occupational therapists, and physiotherapists.^{1,2}
17 Traditionally, patients have accessed primary care services face-to-face, but increasingly the telephone is
18 being used for the initial approach; indeed the telephone has been considered a routine mode of
19 accessing health care services for more than two decades.³ Drivers for telephone access to primary care
20 services in recent years include increased demand on services placing pressure on limited resources,⁴
21 an increased demand for same-day appointments,⁴ and the need to manage long waiting lists.^{5,6}

22 There are various types of telephone consultation referred to in the literature, each with a slightly different
23 purpose. Telephone triage (sometimes called telephone screening) is commonly defined as a method of
24 assessing the urgency of a patient's complaint and determining the type of healthcare required as well as
25 how rapidly it needs to be provided.⁷ Telephone triage can be conducted by healthcare professionals, but
26 in some cases it is conducted by trained but unqualified staff with the assistance of computer algorithms
27 and protocols.⁸ Telephone triage is used in many countries across the world in out-of hours call centres
28 (e.g. Australia, Denmark, Netherlands, UK, US).⁷

29 Initial telephone consultations (sometimes referred to as assessments) go further than triaging patients; a
30 full clinical assessment is conducted over the telephone by a healthcare professional and decision-
31 making regarding patient management is carried out.⁹ The result may be signposting to other services or
32 urgently accessing emergency services if a serious condition (e.g. fracture) is suspected, provision of a

33 brief or longer intervention by telephone, or arranging further face-to-face intervention. Whilst there are
34 clearly areas of similarity between telephone triage and initial consultations,⁸ it can be argued that there
35 are two key differences. Firstly, the telephone consultation is an in-depth clinical assessment whilst
36 telephone triage is a rapid and brief determination of the patient's requirements.⁸ Secondly, telephone
37 consultations are commonly pre-booked and allocated a specific duration, whilst telephone triage might
38 be pre-booked but are also commonly ad-hoc as in emergency out-of-hours services. Telephone
39 consultations have been reported in several specialities including General Practice,^{10,11} occupational
40 health,¹² outpatient physiotherapy,⁹ and outpatient chemotherapy¹³. It is initial telephone consultations that
41 are the focus of this review as they are increasingly being used in primary care largely due to
42 supply/demand issues, and are being used by increasing types of professional groups, such as allied
43 health professionals⁶ and psychologists,¹⁴ who do not traditionally receive training in their conduct at
44 undergraduate level. It is therefore appropriate to map the current evidence to inform future practice.

45 Despite the definitions presented here, telephone triage, consultation and assessment are at times used
46 interchangeably in the literature.¹⁵ The proposed scoping review will focus on telephone consultations as
47 defined here; cognisance of the varying and interchangeable definitions will be taken during the conduct
48 of the review in order that literature is not excluded inadvertently due to the authors' use of terminology.
49 For example a paper that uses the term "telephone triage", but on reading fulfils our definition of initial
50 telephone consultation, will be included in the review.

51 There are many similarities between initial telephone and traditional face-to-face consultations, for
52 example both require the following components: a beginning, questioning, decision-making and ending.⁸
53 There may however be differences in the protocols followed and documentation used,^{4,8} as well as the
54 specific skills required to compensate for the lack of visual cues during the consultation,⁴ such as
55 enhanced communication skills which are often cited in the literature as important for initial telephone
56 consultations.⁷⁻⁹ Due to these differences, training in the delivery of initial telephone consultations, in
57 order to develop the enhanced skill-set required, has been recommended.^{4,8}

58 The proposed scoping review will not focus on telemedicine (often referred to as telehealth), but a
59 definition is provided here for clarity. The World Health Organization defines telemedicine as "the delivery
60 of health care services, where distance is a critical factor, by all health care professionals using
61 information and communication technologies for the exchange of valid information for diagnosis,
62 treatment and prevention of disease and injuries..."¹⁶ (p10). Telemedicine therefore has a particular focus
63 on remote-rural healthcare delivery and technology-enabled care¹⁷, and despite the prefix "tele" is not
64 only concerned with delivery by telephone; in this way it is distinct from telephone consultation. As with
65 triage however, there are areas of overlap between telemedicine and initial telephone consultation, and
66 we will similarly take steps to prevent inadvertent exclusion of relevant literature during the conduct of our
67 scoping review.

68 Primary care telephone consultations have demonstrated clinical and cost-effectiveness.^{6,18} It has been
69 recognised however that enhanced skills are required for conducting them effectively and that training
70 and support is required for health professionals undertaking this role.^{7,13} There do not, however, appear to
71 be any widely used standards or recommendations for training and/or support that should be provided to
72 primary health care practitioners conducting initial telephone consultations. The proposed scoping review
73 will be the first step towards developing such recommendations.

74 No systematic reviews (scoping or otherwise) have been conducted on the components, skills and
75 training required for initial telephone consultations in primary care. A preliminary search of the literature
76 (Cochrane Library, JBI Database of Systematic Reviews and Implementation Reports, Medline, CINAHL)
77 identified systematic reviews on the effectiveness of telemedicine and telemonitoring,^{e.g.19-22}. Two
78 systematic reviews related to secondary care were identified,^{23,24} and one systematic review which
79 combined telephone consultation and triage and conducted more than ten years ago was also identified.¹⁵
80 No scoping reviews were identified. With the importance and prevalence of initial telephone consultations
81 in primary care it is therefore appropriate for this scoping review to be conducted in order to map the
82 current evidence on the components, skills and training required for conducting initial telephone
83 consultations. This review will summarize the current literature and provide clinicians' with an overview of
84 the components, skills and training required for conducting initial telephone consultations in primary care
85 that will inform training, support and service design. It will also identify gaps in the literature that can be
86 addressed by future research.

87 **Keywords**

88 Telephone consultation; Telephone Assessment; Primary Health Care; Staff Development; Patient
89 Assessment

90 **Methods**

91 **Inclusion Criteria**

92 **Participants**

93 This scoping review will consider studies that include any qualified healthcare practitioner (such as
94 doctor/physician, nurse, allied health professional, pharmacist) working in primary care services. Allied
95 health professionals will include dietitians, occupational therapists, physiotherapists, and speech and
96 language therapists.²⁵

97 **Concept**

98 The concept of interest for the proposed scoping review is initial telephone consultations in primary care,
99 i.e. a telephone consultation that includes a clinical assessment and decision-making for a new episode

100 of care.⁹ This excludes telephone “triage” or “screening”, where the purpose is to determine the level of
101 urgency and type of healthcare required, and which may be conducted by healthcare professionals or
102 unqualified staff.^{7,8} This scoping review is interested in telephone consultations whose purpose is to
103 conduct a clinical assessment over the telephone, leading to some form of intervention, which might
104 include signposting to relevant services, brief interventions (including advice-giving) or longer
105 interventions which might be delivered by telephone, face-to-face or via digital media.

106 **Context**

107 The context of this scoping review is primary care in developed nations. Primary care includes general
108 practice clinics, outpatient clinics and any other healthcare settings where service users are not classed
109 as in-patients. Developed nations will be defined as very high human development (51 countries) in the
110 Human Development Index.²⁶

111 **Study Types**

112 We will consider a broad range of published and unpublished literature in this scoping review including
113 primary research studies, systematic reviews, reports and expert opinion. Quantitative study designs
114 including experimental, quasi-experimental, descriptive and observational studies where any quantitative
115 data is reported that can be included in the review will be considered. We will also consider studies that
116 focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory,
117 ethnography and action research. We will also consider government reports, expert opinion, discussion
118 papers, position papers, and other forms of text, as they may be relevant to the review questions.

119 **Search Strategy**

120 A three-step search strategy will be utilized in this review. An initial limited search of Medline and
121 CINAHL will be undertaken followed by analysis of the text words contained in the title and abstract, and
122 of the index terms used to describe the article. A second search using all identified keywords and index
123 terms will be undertaken across all included databases. Thirdly, the reference lists of all identified articles
124 and reports will be hand searched for additional studies. A detailed search strategy for Medline is
125 presented in Appendix 1.

126 The databases to be searched include: Medline, CINAHL, EmBase, AMED, PsychARTICLES, ERIC,
127 PEDro, Cochrane library (controlled trials and systematic reviews), Campbell, EPPI-Centre (DoPHER &
128 TRoPHI), and Epistemonikos.

129 The search for unpublished studies will include: Google Scholar, OpenDOAR, EThOS, websites of
130 professional bodies such as, but not limited to, British Medical Association, Royal College of General
131 Practitioners, British Psychological Association, Australian Medical Association, American Medical
132 Association, Royal College of Nursing, American Nurses Association, Chartered Society of

133 Physiotherapy, and Royal Pharmaceutical Society. A full list of professional and regulatory bodies in the
134 51 countries of interest will be compiled prior to commencing the search.

135 Initial keywords will include: telephone consultation, telephone assessment, primary care. An information
136 scientist will assist the authors with developing the final search strategy. Due to time constraints only
137 studies published in English will be considered. In order to provide a map of reasonably recent evidence
138 only studies published since 2002 will be included. Furthermore, a previous Systematic Review¹⁵ on
139 effectiveness and patient satisfaction of telephone consultation and triage failed to identify any literature
140 on telephone consultation prior to 2002.

141 **Study Selection**

142 Following the search, all identified citations will be collated and uploaded into Refworks[®] and duplicates
143 will be removed. Titles and abstracts will then be screened by two independent reviewers for relevance to
144 the review questions and concept as defined above. Where there is any doubt the full article will be
145 retrieved. Studies that appear to be relevant for inclusion in the review will be retrieved in full and
146 assessed in detail against the inclusion criteria by two independent reviewers. Full text studies that do not
147 meet the inclusion criteria will be excluded and reasons for exclusion will be provided in an appendix in
148 the final report. The results of the search and selection process will be reported in full and presented in a
149 PRISMA flow diagram. Any disagreements that arise between the reviewers will be resolved through
150 discussion, or with a third reviewer.

151 **Data Extraction**

152 Data relevant to the three review questions will be extracted from the included studies by two
153 independent reviewers using methods recommended by Peters et al.^{27,28} The data extracted will include:
154 professional group undertaking initial telephone consultations, patient group, sample sizes, primary care
155 setting, outcomes recorded, and findings relevant to the components, skills and training required for initial
156 telephone consultations. Where relevant, authors of included studies will be contacted for clarification or
157 missing information. A draft data extraction form is available in Appendix 1; this will be tested on 3 articles
158 and may be subsequently refined depending on the data available for extraction.

159 **Presentation of the results**

160 The results will be presented as a map of the data extracted from the included articles in tabular form for
161 each review question. Each table will present the different results for each review question with a
162 narrative summary to accompany the tabulated results. Each table will include author, date of publication,
163 country of origin, as well as data relevant to the review questions such as the components included in
164 primary care initial telephone consultations, the skills required by healthcare professionals to deliver initial
165 telephone consultations and what training is recommended for healthcare professionals to deliver initial

166 telephone consultations in primary care. Appendix 2 details draft results tables; as with the data extraction
167 tool these will be piloted and may be subject to amendment during the review process.

168 **Conflicts of Interest**

169 There are no conflicts of interest to declare.

170 **Acknowledgements**

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237

238 **Appendix 1: Search Strategy for Medline**

#1	Telephone (mh) OR Phone (kw)
#2	Assessment (kw) OR Referral and Consultation (mh) OR Appointments and Schedules (mh) OR Appointment (kw)
#3	Primary Health Care (mh) OR Outpatients (mh) OR General Practice OR Physicians (mh) OR Allied Health Personnel (mh) OR Physical Therap* OR Physiotherap* OR Occupational Therap* OR Nutritionists (mh) OR Dietician (kw) OR Pharmac* OR Psycholog* OR Speech Therapy (mh) OR Nurs*
#4	1 AND 2 AND 3 AND 4

239