### Article Characteristics

**Setting**
- Tertiary care: the intervention is evaluated in a tertiary care setting, may be outpatient care (i.e. healthcare provider is a specialist or works in a specialty clinic)
- Primary care: the intervention is evaluated in a primary care/community setting (i.e. healthcare provider is in primary care or general practice)
- Academic: the intervention is evaluated through an academic setting (i.e. healthcare provider is based out of a university department, such as Behavioral Sciences)
- Business: intervention is evaluated in a business context (i.e. through CVS Pharmacy, Walmart)

**Tool Characteristics**

**Medium of communication**
- Website: URL accessible via an internet browser (whether mobile or computer-based)
- Hybrid website/software application: an intervention which uses a software application and uploads information to the internet, which may have a web-based interface as well
- Mobile phone-based native application (i.e. SMS): an app usable on cell phone
- Software: a program installed on a computer’s hard drive that may be linked to the internet, but stores information on the computer itself as oppose to online
- Email-based application: a tool which makes use of email (i.e. text-based communication exchange which houses data on the server of the sender and on the server of the recipient)

**Functionality**
- Asynchronous: non-concurrent communication between patient and healthcare provider
- Synchronous: patient and healthcare provider(s) must use the tool at the same time (i.e telephone)

**Type of communication**
- Unstructured communication: patient-provider free-form: two-way unstructured text-based dialogue
- Structured communication: structured responses or recommendations by a trained end-user (healthcare provider/therapist/research assistant) to information input from the patient

**Intended use**
- Lifestyle/behavior modification: altering habits or behaviors to improve patient management of illness
- Symptom management: reporting, monitoring or medical treatment related to the care of specific symptoms
- Care planning: developing and adherence to protocol for administration and receipt of care and medical procedures
- Medication adherence: adherence to prescribed medications

**Evaluation**

**Study design**
- Randomized controlled trial: an experimental study in which people are randomly allocated to different interventions
- Cohort study: a study in which a defined group of people (the cohort) is followed over time,
to examine associations between different interventions received and subsequent outcomes. A 'prospective' cohort study recruits participants before any intervention and follows them into the future. A 'retrospective' cohort study identifies subjects from past records describing the interventions received and follows them from the time of those records.

<table>
<thead>
<tr>
<th>Study Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Case-control study</td>
<td>A study that compares people with a specific outcome of interest (‘cases’) with people from the same source population but without that outcome (‘controls’), to examine the association between the outcome and prior exposure.</td>
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<tr>
<td>Quasi-experimental/Non-randomized controlled trial</td>
<td>An experimental study in which people are allocated to different interventions using methods that are not random.</td>
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<td>Cross-sectional study</td>
<td>A study that collects information on interventions (past or present) and current health outcomes, i.e. restricted to health states, for a group of people at a particular point in time, to examine associations between the outcomes and exposure to interventions.</td>
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<tr>
<td>Cost-effectiveness analysis</td>
<td>A study evaluating costs, especially relative to effect or utility of an intervention.</td>
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<tr>
<td>Qualitative study</td>
<td>Involving a method of data collection comprising interviews and focus groups; data is narrative in nature. Approaches include grounded theory, ethnography, phenomenology.</td>
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**Stage of evaluation**

- **Development** - identifying evidence base, identifying or developing theory, modelling processes and outcomes.
- **Feasibility/piloting** - testing procedures, estimating recruitment and retention, determining sample size.
- **Evaluation** - assessing effectiveness, understanding change processes, assessing cost-effectiveness.
- **Implementation** - dissemination, surveillance and monitoring, long-term follow-up.

**Outcomes**

- **Health outcomes** - clinical data, quality of life or care, healthcare utilization, illness knowledge.
- **Usability[1]** - ease of use related outcomes.
- **Usage** - how the tool was used, e.g. frequency of use.
- **Costs** - medical costs, costs related to implementation or use.
- **Acceptability/Feasibility (collected via questionnaire)[1]** - described as feasibility or acceptability measure including satisfaction with implementation, interest, willingness-to-use, attitudes.
- **Experience (open-ended/unstructured responses)** - focused on perceptions around the intervention.
- **Clinical** - clinical data, quality of life or care, healthcare utilization, knowledge.

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*a Adapted from the Cochrane Handbook for Systematic Reviews[2]

*b Based on the MRC 2008 Framework for the Evaluation of Complex Interventions[3]*
References

