# CONSORT-EHEALTH (V 1.6.1) - Submission/Publication Form

The CONSORT-EHEALTH checklist is intended for authors of randomized trials evaluating web-based and Internet-based applications/interventions, including mobile interventions, electronic games (incl multiplayer games), social media, certain telehealth applications, and other interactive and/or networked electronic applications. Some of the items (e.g. all subitems under item 5 - description of the intervention) may also be applicable for other study designs.

The goal of the CONSORT EHEALTH checklist and guideline is to be

- a) a guide for reporting for authors of RCTs,
- b) to form a basis for appraisal of an ehealth trial (in terms of validity)

CONSORT-EHEALTH items/subitems are MANDATORY reporting items for studies published in the Journal of Medical Internet Research and other journals / scientific societies endorsing the checklist.

Items numbered 1., 2., 3., 4a., 4b etc are original CONSORT or CONSORT-NPT (non-pharmacologic treatment) items.

Items with Roman numerals (i., ii, iii, iv etc.) are CONSORT-EHEALTH extensions/clarifications.

As the CONSORT-EHEALTH checklist is still considered in a formative stage, we would ask that you also RATE ON A SCALE OF 1-5 how important/useful you feel each item is FOR THE PURPOSE OF THE CHECKLIST and reporting guideline (optional).

Mandatory reporting items are marked with a red \*.

In the textboxes, either copy & paste the relevant sections from your manuscript into this form - please include any quotes from your manuscript in QUOTATION MARKS, or answer directly by providing additional information not in the manuscript, or elaborating on why the item was not relevant for this study.

YOUR ANSWERS WILL BE PUBLISHED AS A SUPPLEMENTARY FILE TO YOUR PUBLICATION IN JMIR AND ARE CONSIDERED PART OF YOUR PUBLICATION (IF ACCEPTED).

Please fill in these questions diligently. Information will not be copyedited, so please use proper spelling and grammar, use correct capitalization, and avoid abbreviations.

DO NOT FORGET TO SAVE AS PDF \_AND\_ CLICK THE SUBMIT BUTTON SO YOUR ANSWERS ARE IN OUR DATABASE !!!

Citation Suggestion (if you append the pdf as Appendix we suggest to cite this paper in the caption):

Eysenbach G, CONSORT-EHEALTH Group

CONSORT-EHEALTH: Improving and Standardizing Evaluation Reports of Web-based and

Mobile Health Interventions

J Med Internet Res 2011;13(4):e126 URL: <a href="http://www.jmir.org/2011/4/e126/">http://www.jmir.org/2011/4/e126/</a>

doi: 10.2196/jmir.1923 PMID: 22209829

martinez.jb07@gmail.com Switch account



Not shared



Draft saved

\* Indicates required question

Your name \*

First Last

Jacob Martinez

Primary Affiliation (short), City, Country \*

University of Toronto, Toronto, Canada

The University of Texas at El Paso

Your e-mail address \*

abc@gmail.com

jmartinez41@utep.edu

Title of your manuscript \*

Provide the (draft) title of your manuscript.

Human Papillomavirus Education and Professional Skills Intervention for Healthcare Providers: Protocol for a Randomized Controlled Trial

Name of your App/Software/Intervention \*

If there is a short and a long/alternate name, write the short name first and add the long name in brackets.

HPV Education and Communication Skills Inte

Evaluated Version (if any)

e.g. "V1", "Release 2017-03-01", "Version 2.0.27913"

Your answer

Language(s) \*

What language is the intervention/app in? If multiple languages are available, separate by comma (e.g. "English, French")

English

URL of your Intervention Website or App

e.g. a direct link to the mobile app on app in appstore (itunes, Google Play), or URL of the website. If the intervention is a DVD or hardware, you can also link to an Amazon page.

Your answer

URL of an image/screenshot (optional)

Your answer

Accessibility * Can an enduser access the intervention presently?
access is free and open
<ul><li>access only for special usergroups, not open</li></ul>
access is open to everyone, but requires payment/subscription/in-app purchases
app/intervention no longer accessible
Other:

Primary Medical Indication/Disease/Condition \*

e.g. "Stress", "Diabetes", or define the target group in brackets after the condition, e.g. "Autism (Parents of children with)", "Alzheimers (Informal Caregivers of)"

**HPV Cancer Prevention (Healthcare Providers)** 

Primary Outcomes measured in trial \* comma-separated list of primary outcomes reported in the trial

Between-group changes in proportions from po

Secondary/other outcomes

Are there any other outcomes the intervention is expected to affect?

Between-group changes in proportions from post-intervention scores of the Human Papillomavirus (HPV) Vaccine Attitudes, Between-group changes in proportions from post-intervention scores on the Human Papillomavirus (HPV) Knowledge

Recommended "Dose" * What do the instructions for users say on how often the app should be used?
Approximately Daily
Approximately Weekly
Approximately Monthly
Approximately Yearly
"as needed"
Other:
Approx. Percentage of Users (starters) still using the app as recommended after * 3 months
unknown / not evaluated
0-10%
O 11-20%
21-30%
31-40%
O 41-50%
51-60%
61-70%
71%-80%
81-90%
91-100%
Other:

Overall, was the app/intervention effective? *
yes: all primary outcomes were significantly better in intervention group vs control
partly: SOME primary outcomes were significantly better in intervention group vs control
on statistically significant difference between control and intervention
outcomes potentially harmful: control was significantly better than intervention in one or more
inconclusive: more research is needed
Other: Not launched yet
Article Preparation Status/Stage *
Article Preparation Status/Stage * At which stage in your article preparation are you currently (at the time you fill in this form)
•
At which stage in your article preparation are you currently (at the time you fill in this form)
At which stage in your article preparation are you currently (at the time you fill in this form)  not submitted yet - in early draft status
At which stage in your article preparation are you currently (at the time you fill in this form)  not submitted yet - in early draft status  not submitted yet - in late draft status, just before submission
At which stage in your article preparation are you currently (at the time you fill in this form)  not submitted yet - in early draft status  not submitted yet - in late draft status, just before submission  submitted to a journal but not reviewed yet
At which stage in your article preparation are you currently (at the time you fill in this form)  not submitted yet - in early draft status  not submitted yet - in late draft status, just before submission  submitted to a journal but not reviewed yet  submitted to a journal and after receiving initial reviewer comments
At which stage in your article preparation are you currently (at the time you fill in this form)  onot submitted yet - in early draft status  not submitted yet - in late draft status, just before submission  submitted to a journal but not reviewed yet  submitted to a journal and after receiving initial reviewer comments  submitted to a journal and accepted, but not published yet

Journal *  If you already know where you will submit this paper (or if it is already submitted), please provide the journal name (if it is not JMIR, provide the journal name under "other")
not submitted yet / unclear where I will submit this
Journal of Medical Internet Research (JMIR)
JMIR mHealth and UHealth
JMIR Serious Games
JMIR Mental Health
JMIR Public Health
JMIR Formative Research
Other JMIR sister journal
Other: JMIR Research Protocols
Is this a full powered effectiveness trial or a pilot/feasibility trial? *
Pilot/feasibility
Pilot/feasibility     Fully powered
Fully powered
Manuscript tracking number *  If this is a JMIR submission, please provide the manuscript tracking number under "other" (The ms tracking number can be found in the submission acknowledgement email, or when you login as author in JMIR. If the paper is already published in JMIR, then the ms tracking number is the four-digit number at the end of the DOI, to be found at the bottom of

TITLE AND ABSTRACT
1a) TITLE: Identification as a randomized trial in the title
1a) Does your paper address CONSORT item 1a? * I.e does the title contain the phrase "Randomized Controlled Trial"? (if not, explain the reason under "other")
yes
Other:

# 1a-i) Identify the mode of delivery in the title

Identify the mode of delivery. Preferably use "web-based" and/or "mobile" and/or "electronic game" in the title. Avoid ambiguous terms like "online", "virtual", "interactive". Use "Internet-based" only if Intervention includes non-web-based Internet components (e.g. email), use "computer-based" or "electronic" only if offline products are used. Use "virtual" only in the context of "virtual reality" (3-D worlds). Use "online" only in the context of "online support groups". Complement or substitute product names with broader terms for the class of products (such as "mobile" or "smart phone" instead of "iphone"), especially if the application runs on different platforms.

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subitem not at all important	0	0	0	0	•	essential
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Does your paper address subitem 1a-i? \*

Copy and paste relevant sections from manuscript title (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"REDCap, a web-based platform"

1a-ii) Non-web-based components or important co-interventions in title Mention non-web-based components or important co-interventions in title, if any (e.g., "with telephone support").

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# Does your paper address subitem 1a-ii?

Copy and paste relevant sections from manuscript title (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

No non-web based components included, since the intervention is delivered on a web based platform

#### 1a-iii) Primary condition or target group in the title

Mention primary condition or target group in the title, if any (e.g., "for children with Type I Diabetes") Example: A Web-based and Mobile Intervention with Telephone Support for Children with Type I Diabetes: Randomized Controlled Trial

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# Does your paper address subitem 1a-iii? \*

Copy and paste relevant sections from manuscript title (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Both current (in practice) and emerging (in training) practitioners in the professions of medicine (i.e., Doctor of Medicine [MD], Doctor of Osteopathic Medicine [DO], Physician Assistant [PA], Nurse Practitioner [NP]), pharmacy (PharmD), or nursing (RN) are eligible to participate in the study."

# 1b) ABSTRACT: Structured summary of trial design, methods, results, and conclusions

NPT extension: Description of experimental treatment, comparator, care providers, centers, and blinding status.

1b-i) Key features/functionalities/components of the intervention and comparator in the METHODS section of the ABSTRACT

Mention key features/functionalities/components of the intervention and comparator in the abstract. If possible, also mention theories and principles used for designing the site. Keep in mind the needs of systematic reviewers and indexers by including important synonyms. (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

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subitem not at all important	0	0	0	0	•	essential
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Does your paper address subitem 1b-i? \*

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Improve provider recommendations and patient communication strategies, using motivational techniques to increase education in HPV knowledge, vaccine uptake, and screening in the Hispanic community by recruiting healthcare providers (N = 150)."

"We will conduct a randomized post-test only controlled behavioral trial using a parallel group design that will examine the effectiveness of a culturally tailored HPV education and professional skills intervention containing unique reading material and video role-play."

1b-ii) Level of human involvement in the METHODS section of the ABSTRACT

Clarify the level of human involvement in the abstract, e.g., use phrases like "fully automated" vs. "therapist/nurse/care provider/physician-assisted" (mention number and expertise of providers involved, if any). (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

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# Does your paper address subitem 1b-ii?

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

fully automated, no human involvement

1b-iii) Open vs. closed, web-based (self-assessment) vs. face-to-face assessments in the METHODS section of the ABSTRACT

Mention how participants were recruited (online vs. offline), e.g., from an open access website or from a clinic or a closed online user group (closed usergroup trial), and clarify if this was a purely web-based trial, or there were face-to-face components (as part of the intervention or for assessment). Clearly say if outcomes were self-assessed through questionnaires (as common in web-based trials). Note: In traditional offline trials, an open trial (open-label trial) is a type of clinical trial in which both the researchers and participants know which treatment is being administered. To avoid confusion, use "blinded" or "unblinded" to indicated the level of blinding instead of "open", as "open" in web-based trials usually refers to "open access" (i.e. participants can self-enrol). (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

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# Does your paper address subitem 1b-iii?

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Your answer

# 1b-iv) RESULTS section in abstract must contain use data

Report number of participants enrolled/assessed in each group, the use/uptake of the intervention (e.g., attrition/adherence metrics, use over time, number of logins etc.), in addition to primary/secondary outcomes. (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

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# Does your paper address subitem 1b-iv?

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

protocol manuscript, results not obtained yet

# 1b-v) CONCLUSIONS/DISCUSSION in abstract for negative trials

Conclusions/Discussions in abstract for negative trials: Discuss the primary outcome - if the trial is negative (primary outcome not changed), and the intervention was not used, discuss whether negative results are attributable to lack of uptake and discuss reasons. (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

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# Does your paper address subitem 1b-v?

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

protocol manuscript, results not obtained yet (nor assessment of negative or positive impact of trial exists)

#### INTRODUCTION

2a) In INTRODUCTION: Scientific background and explanation of rationale

# 2a-i) Problem and the type of system/solution

Describe the problem and the type of system/solution that is object of the study: intended as stand-alone intervention vs. incorporated in broader health care program? Intended for a particular patient population? Goals of the intervention, e.g., being more cost-effective to other interventions, replace or complement other solutions? (Note: Details about the intervention are provided in "Methods" under 5)

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Does your paper address subitem 2a-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Improve provider recommendations and patient communication strategies, using motivational techniques to increase education in HPV knowledge, vaccine uptake, and screening in the Hispanic community by recruiting healthcare providers (N = 150) serving the El Paso US-Mexico Border Region to compare educational and professional skills interventions focused on HPV."

2a-ii) Scientific background, rationale: What is known about the (type of) system Scientific background, rationale: What is known about the (type of) system that is the object of the study (be sure to discuss the use of similar systems for other conditions/diagnoses, if appropiate), motivation for the study, i.e. what are the reasons for and what is the context for this specific study, from which stakeholder viewpoint is the study performed, potential impact of findings [2]. Briefly justify the choice of the comparator.

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Does your paper address subitem 2a-ii? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Recent literature highlights the importance of receiving HPV vaccine recommendations from healthcare providers in a culturally competent manner, as well as the importance of family in shaping perceptions and behaviors related to vaccinations."

"The proposed study seeks to extend these findings by culturally sensitizing (e.g., familism) materials to Hispanic culture; thus, tailoring training for healthcare providers serving the Hispanic population by addressing attitudes, barriers, culture, and language. The unique capacity to capture current and emerging healthcare providers with access to a predominantly Hispanic community will allow for tailored training."

2b) In INTRODUCTION: Specific objectives or hypotheses

Does your paper address CONSORT subitem 2b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The working hypothesis is that improving provider knowledge and communication strategies about HPV prevention (including the vaccine) will reduce vaccine hesitancy and increase vaccine completion in vaccine-eligible individuals; through a tailored intervention that prepares providers to discuss HPV vaccination in an informed and culturally competent manner and strengthens subsequent provider recommendations."

**METHODS** 

3a) Description of trial design (such as parallel, factorial) including allocation ratio

Does your paper address CONSORT subitem 3a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"We will conduct a mixed (within-between) subjects longitudinal design in which participants are randomly assigned to 1 of 2 conditions and assessed over three time points using a parallel group design that will examine the effectiveness of a tailored HPV education and professional skills intervention. Emerging and current healthcare providers will be randomly assigned to one of two conditions: 1) treatment condition in which they will receive a tailored Education and Professional Skills Intervention, and 2) control condition in which they will receive general, publicly available information about HPV and communication skills."

3b) Important changes to methods after trial commencement (such as eligibility criteria), with reasons

Does your paper address CONSORT subitem 3b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

No changes made to date, protocol manuscript in preparation

# 3b-i) Bug fixes, Downtimes, Content Changes

Bug fixes, Downtimes, Content Changes: ehealth systems are often dynamic systems. A description of changes to methods therefore also includes important changes made on the intervention or comparator during the trial (e.g., major bug fixes or changes in the functionality or content) (5-iii) and other "unexpected events" that may have influenced study design such as staff changes, system failures/downtimes, etc. [2].

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Does your paper address subitem 3b-i?

subitem not at all important

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

No changes made to date, protocol manuscript in preparation

4a) Eligibility criteria for participants

# Does your paper address CONSORT subitem 4a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Participants will be recruited from the healthcare provider population in El Paso County, Texas and Southern New Mexico. Both current (in practice) and emerging (in training) practitioners in the professions of medicine (i.e., Doctor of Medicine [MD], Doctor of Osteopathic Medicine [DO], Physician Assistant [PA], Nurse Practitioner [NP]), pharmacy (PharmD), or nursing (RN) are eligible to participate in the study. To qualify, participants must be a current (in practice) or emerging (in training – student, resident, or fellow) healthcare provider, be between the ages of 18 and 65, be working/training or living in the Paso del Norte Region (i.e., El Paso County, TX-Southern New Mexico), have access to an electronic device with internet access (e.g., cell phone, tablet, computer, etc.), and have the authorization to recommend the HPV vaccine."

#### 4a-i) Computer / Internet literacy

Computer / Internet literacy is often an implicit "de facto" eligibility criterion - this should be explicitly clarified.

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# Does your paper address subitem 4a-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"have access to an electronic device with internet access (e.g., cell phone, tablet, computer, etc.)"

# 4a-ii) Open vs. closed, web-based vs. face-to-face assessments:

Open vs. closed, web-based vs. face-to-face assessments: Mention how participants were recruited (online vs. offline), e.g., from an open access website or from a clinic, and clarify if this was a purely web-based trial, or there were face-to-face components (as part of the intervention or for assessment), i.e., to what degree got the study team to know the participant. In online-only trials, clarify if participants were quasi-anonymous and whether having multiple identities was possible or whether technical or logistical measures (e.g., cookies, email confirmation, phone calls) were used to detect/prevent these.

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#### Does your paper address subitem 4a-ii? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Researchers will use a purposive sampling technique to recruit participants through multimedia (i.e., print, email) and professional network contacts. Specifically, this section of the study will recruit from: 1) the main campus and some regional clinical hubs of the Burrell College of Osteopathic Medicine; 2) the UTEP Colleges of Health Sciences, Pharmacy, and Nursing; 3) Federally Qualified Health Centers (FQHC) in the Paso del Norte Region; 4) private provider clinics; and 5) other healthcare workers and professional network connections that provide training and services to the Paso del Norte region residents. Special attention will be given to recruit practitioners in the specialties of pediatrics, family medicine, and obstetrics and gynecology due to their increased familiarity with vaccines, HPV and cancer."

#### 4a-iii) Information giving during recruitment

Information given during recruitment. Specify how participants were briefed for recruitment and in the informed consent procedures (e.g., publish the informed consent documentation as appendix, see also item X26), as this information may have an effect on user self-selection, user expectation and may also bias results.

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# Does your paper address subitem 4a-iii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

information provided based on email communications, flyers, and word of mouth

4b) Settings and locations where the data were collected

Does your paper address CONSORT subitem 4b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Participants will be recruited "from: 1) the main campus and some regional clinical hubs of the Burrell College of Osteopathic Medicine; 2) the UTEP Colleges of Health Sciences, Pharmacy, and Nursing; 3) Federally Qualified Health Centers (FQHC) in the Paso del Norte Region; 4) private provider clinics; and 5) other healthcare workers and professional network connections that provide training and services to the Paso del Norte region residents. Special attention will be given to recruit practitioners in the specialties of pediatrics, family medicine, and obstetrics and gynecology due to their increased familiarity with vaccines, HPV and cancer."

4b-i) Report if outcomes were (self-)assessed through online questionnaires Clearly report if outcomes were (self-)assessed through online questionnaires (as common in web-based trials) or otherwise.

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Does your paper address subitem 4b-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"All the survey questionnaire measures/instruments will be made available electronically in English"

# 4b-ii) Report how institutional affiliations are displayed

Report how institutional affiliations are displayed to potential participants [on ehealth media], as affiliations with prestigious hospitals or universities may affect volunteer rates, use, and reactions with regards to an intervention.(Not a required item – describe only if this may bias results)

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# Does your paper address subitem 4b-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

institutional logos displayed, but is not believed to play a role

- 5) The interventions for each group with sufficient details to allow replication, including how and when they were actually administered
- 5-i) Mention names, credential, affiliations of the developers, sponsors, and owners Mention names, credential, affiliations of the developers, sponsors, and owners [6] (if authors/evaluators are owners or developer of the software, this needs to be declared in a "Conflict of interest" section or mentioned elsewhere in the manuscript).

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# Does your paper address subitem 5-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

#### "Conflicts of Interest

The study team developed the intervention, and as per CONSORT-EHEALTH recommendations, we declare this as a potential conflict of interest."

# 5-ii) Describe the history/development process

Describe the history/development process of the application and previous formative evaluations (e.g., focus groups, usability testing), as these will have an impact on adoption/use rates and help with interpreting results.

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#### Does your paper address subitem 5-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"All components of the clinical trial (survey, control and experimental intervention modules, recruitment plan and communications, etc.) will undergo multiple rounds of review and revision by members of the research team. In addition, the intervention and survey were pilot tested with a small group (n=7) of providers in training or in practice and feedback from those individuals was incorporated into the final product(s). For example, demographic questions such as participant gender were changed to reflect participant's concerns on gender identity. In addition, the pilot test helped to clarify questions regarding previous HPV infections: "How likely do you think it is that you have ever been infected with HPV?" and "How likely do you think it is that your current or recent partner(s) has (have) ever been infected with HPV?""

#### 5-iii) Revisions and updating

Revisions and updating. Clearly mention the date and/or version number of the application/intervention (and comparator, if applicable) evaluated, or describe whether the intervention underwent major changes during the evaluation process, or whether the development and/or content was "frozen" during the trial. Describe dynamic components such as news feeds or changing content which may have an impact on the replicability of the intervention (for unexpected events see item 3b).

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# Does your paper address subitem 5-iii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

The intervention is being reported in a protocol manuscript and therefore no revisions or updating has occurred.

# 5-iv) Quality assurance methods

Provide information on quality assurance methods to ensure accuracy and quality of information provided [1], if applicable.

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# Does your paper address subitem 5-iv?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

No quality assurance methods have been assessed to date as the protocol is being prepared for manuscript.

5-v) Ensure replicability by publishing the source code, and/or providing screenshots/screen-capture video, and/or providing flowcharts of the algorithms used

Ensure replicability by publishing the source code, and/or providing screenshots/screen-capture video, and/or providing flowcharts of the algorithms used. Replicability (i.e., other researchers should in principle be able to replicate the study) is a hallmark of scientific reporting.

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subitem not at all important

Clear selection

essential

# Does your paper address subitem 5-v?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Replicability has not been accounted for or documented to date as the protocol is being prepared for manuscript.

# 5-vi) Digital preservation

Digital preservation: Provide the URL of the application, but as the intervention is likely to change or disappear over the course of the years; also make sure the intervention is archived (Internet Archive, <a href="webcitation.org">webcitation.org</a>, and/or publishing the source code or screenshots/videos alongside the article). As pages behind login screens cannot be archived, consider creating demo pages which are accessible without login.

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# Does your paper address subitem 5-vi?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Digital preservation has not been accounted for or documented to date as the protocol is being prepared for manuscript.

#### 5-vii) Access

Access: Describe how participants accessed the application, in what setting/context, if they had to pay (or were paid) or not, whether they had to be a member of specific group. If known, describe how participants obtained "access to the platform and Internet" [1]. To ensure access for editors/reviewers/readers, consider to provide a "backdoor" login account or demo mode for reviewers/readers to explore the application (also important for archiving purposes, see vi).

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# Does your paper address subitem 5-vii? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

The intervention will be delivered on a web based platform, however, access has not been fully accounted for or documented to date as the protocol is being prepared for manuscript.

5-viii) Mode of delivery, features/functionalities/components of the intervention and comparator, and the theoretical framework

Describe mode of delivery, features/functionalities/components of the intervention and comparator, and the theoretical framework [6] used to design them (instructional strategy [1], behaviour change techniques, persuasive features, etc., see e.g., [7, 8] for terminology). This includes an in-depth description of the content (including where it is coming from and who developed it) [1]," whether [and how] it is tailored to individual circumstances and allows users to track their progress and receive feedback" [6]. This also includes a description of communication delivery channels and – if computer-mediated communication is a component – whether communication was synchronous or asynchronous [6]. It also includes information on presentation strategies [1], including page design principles, average amount of text on pages, presence of hyperlinks to other resources, etc. [1].

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Does your paper address subitem 5-viii? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Participants will be randomly assigned to one of two conditions: 1) treatment condition in which they receive the tailored HPV Education and Professional Skills Intervention, and 2) control condition in which they receive the General Education and Professional Skills Intervention. An online platform will be developed to deploy the HPV Education and Professional Skills Intervention to emerging or current healthcare providers. The platform will be comprised of training modules divided into three sections paralleled among control and experimental groups: a document to be read, a video to be watched, and an activity to complete. Participants will take 15-30 minutes to complete all three sections of the module."

#### 5-ix) Describe use parameters

Describe use parameters (e.g., intended "doses" and optimal timing for use). Clarify what instructions or recommendations were given to the user, e.g., regarding timing, frequency, heaviness of use, if any, or was the intervention used ad libitum.

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# Does your paper address subitem 5-ix?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

single dose to be implemented

# 5-x) Clarify the level of human involvement

Clarify the level of human involvement (care providers or health professionals, also technical assistance) in the e-intervention or as co-intervention (detail number and expertise of professionals involved, if any, as well as "type of assistance offered, the timing and frequency of the support, how it is initiated, and the medium by which the assistance is delivered". It may be necessary to distinguish between the level of human involvement required for the trial, and the level of human involvement required for a routine application outside of a RCT setting (discuss under item 21 – generalizability).

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# Does your paper address subitem 5-x?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

minimal human involvement after recruitment, intervention and assessment measures are delivered on an online platform

# 5-xi) Report any prompts/reminders used

Report any prompts/reminders used: Clarify if there were prompts (letters, emails, phone calls, SMS) to use the application, what triggered them, frequency etc. It may be necessary to distinguish between the level of prompts/reminders required for the trial, and the level of prompts/reminders for a routine application outside of a RCT setting (discuss under item 21 – generalizability).

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#### Does your paper address subitem 5-xi? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Participants will be compensated for their time with an online (electronic) gift card of \$30 value after completion of the initial training session and surveys (~30 minutes). Participants will receive an additional gift card of \$10 value for participation in each of the two follow-up survey sessions (~20 minutes per survey questionnaire) at 3- and 6-months after the initial intervention and survey." Additionally email reminders will be sent post-intervention for follow-up.

# 5-xii) Describe any co-interventions (incl. training/support)

Describe any co-interventions (incl. training/support): Clearly state any interventions that are provided in addition to the targeted eHealth intervention, as ehealth intervention may not be designed as stand-alone intervention. This includes training sessions and support [1]. It may be necessary to distinguish between the level of training required for the trial, and the level of training for a routine application outside of a RCT setting (discuss under item 21 – generalizability.

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# Does your paper address subitem 5-xii? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The control group [active comparator] will receive the General HPV Education and Communication Skills Intervention materials which will be comprised of a 3-page PDF document, a web-based video, and 4 rank-order multiple choice questions to answer. The PDF document will be a standard, publicly available HPV fact sheet from the CDC."

"The experimental [treatment] group will receive the tailored HPV Education and Communication Skills Intervention materials which are comprised of the same categories of content as in the control intervention. In this case, the 3-page PDF document is modeled after the CDC HPV fact sheet, but includes data from the first phase of our program and informs the reader of important and relevant research findings from our region."

6a) Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed

Does your paper address CONSORT subitem 6a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Primary Outcome. Provider Practices. The primary outcome of interest is between-group changes in proportions of provider practices. This will be measured on the 8-item Healthcare Provider (HCP) Practices scale (HCP vaccine recommendations, HCP screening recommendations, and HCP communication practices) scored on a Likert scale from Never (1) to Always (5). Post-intervention practices of healthcare providers will determine change in both strength and frequency of recommending the HPV vaccine to patients. Secondary Outcome Measure(s). The secondary outcomes of interest include understanding provider beliefs and provider knowledge. These will be measured on previously validated scales adapted from the Vaccine Attitudes and Knowledge Survey (VAKS) [10] [18]. Provider Beliefs. Provider beliefs (i.e., attitudes towards HPV vaccine) will be measured using the 9-item HPV Vaccine Attitudes scale (perceived safety, perceived harm, perceived effectiveness) scored on a Likert scale from Strongly disagree (1) to Strongly agree (5). Provider Knowledge. Provider knowledge about HPV and the HPV vaccine will be measured using a previously adapted 14-item HPV Knowledge scale scored as True (1) or False (0)"

6a-i) Online questionnaires: describe if they were validated for online use and apply CHERRIES items to describe how the questionnaires were designed/deployed If outcomes were obtained through online questionnaires, describe if they were validated for online use and apply CHERRIES items to describe how the questionnaires were designed/deployed [9].

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Does your paper address subitem 6a-i?

Copy and paste relevant sections from manuscript text

The online questionnaires did not undergo the CHERRIES items for adequate online design/deployment.

6a-ii) Describe whether and how "use" (including intensity of use/dosage) was defined/measured/monitored

Describe whether and how "use" (including intensity of use/dosage) was defined/measured/monitored (logins, logfile analysis, etc.). Use/adoption metrics are important process outcomes that should be reported in any ehealth trial.

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Does your paper address subitem 6a-ii?

Copy and paste relevant sections from manuscript text

A single dose delivery will be utilized, whereas the intervention will only be delivered once.

6a-iii) Describe whether, how, and when qualitative feedback from participants was obtained

Describe whether, how, and when qualitative feedback from participants was obtained (e.g., through emails, feedback forms, interviews, focus groups).

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Does your paper address subitem 6a-iii?

Copy and paste relevant sections from manuscript text

"The intervention and survey were pilot tested with a small group (n=7) of providers in training or in practice and feedback from those individuals was incorporated into the final product(s). For example, demographic questions such as participant gender were changed to reflect participant's concerns on gender identity. In addition, the pilot test helped to clarify questions regarding previous HPV infections: "How likely do you think it is that you have ever been infected with HPV?" and "How likely do you think it is that your current or recent partner(s) has (have) ever been infected with HPV?" A question was added to elicit the zip code in which the participant primarily practices or trains in, and the amount of time it would take to complete the study was adjusted."

6b) Any changes to trial outcomes after the trial commenced, with reasons

Does your paper address CONSORT subitem 6b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Yes, although there have been no changes to trial outcomes or documented to date as the protocol is being prepared for manuscript only.

7a) How sample size was determined

NPT: When applicable, details of whether and how the clustering by care provides or centers was addressed

7a-i) Describe whether and how expected attrition was taken into account when calculating the sample size

Describe whether and how expected attrition was taken into account when calculating the sample size.

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#### Does your paper address subitem 7a-i?

Copy and paste relevant sections from manuscript title (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"A power analysis estimating a repeated measures within-between interaction, assuming a small effect size (f = 0.15), determined that approximately 110 total participants are required to provide an 80% chance of detecting an effect between the two experimental conditions (tailored intervention vs. active control) across three time points (0, 3, and 6-months post-intervention). To account for an estimated 10-15% attrition, at least 100 participants will be recruited."

7b) When applicable, explanation of any interim analyses and stopping guidelines

Does your paper address CONSORT subitem 7b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Not applicable for this intervention.

8a) Method used to generate the random allocation sequence NPT: When applicable, how care providers were allocated to each trial group

#### Does your paper address CONSORT subitem 8a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Sequence Generation. After determining eligibility, we will randomize participants on a 1:1 basis to intervention groups (experimental versus control) while controlling for the potential bias introduced by factors of sex, age, and career stage. To achieve this goal, we will utilize a randomization table within REDCap to create balanced treatment groups based on these factors and reduce the effect of selection bias."

8b) Type of randomisation; details of any restriction (such as blocking and block size)

#### Does your paper address CONSORT subitem 8b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The current study is double masked (i.e., participant and outcomes assessor). Participants will be randomly assigned to treatment and control groups; they will not be made aware of other participants' receipt of treatment or control materials. Participants will be asked not to discuss this project outside of the intervention; delivery of the intervention or other educational materials will be virtual, limiting the ability of participants to interact with one another during the study"

9) Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned

Does your paper address CONSORT subitem 9? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"To achieve this goal, we will utilize a randomization table within REDCap to create balanced treatment groups based on these factors and reduce the effect of selection bias."

10) Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions

Does your paper address CONSORT subitem 10? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"To achieve this goal, we will utilize a randomization table within REDCap (an online platform) to create balanced treatment groups based on these factors and reduce the effect of selection bias."

11a) If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how NPT: Whether or not administering co-interventions were blinded to group assignment

#### 11a-i) Specify who was blinded, and who wasn't

Specify who was blinded, and who wasn't. Usually, in web-based trials it is not possible to blind the participants [1, 3] (this should be clearly acknowledged), but it may be possible to blind outcome assessors, those doing data analysis or those administering cointerventions (if any).

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# Does your paper address subitem 11a-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The current study is double masked (i.e., participant and outcomes assessor). Participants will be randomly assigned to treatment and control groups; they will not be made aware of other participants' receipt of treatment or control materials. Participants will be asked not to discuss this project outside of the intervention; delivery of the intervention or other educational materials will be virtual, limiting the ability of participants to interact with one another during the study."

11a-ii) Discuss e.g., whether participants knew which intervention was the "intervention of interest" and which one was the "comparator"

Informed consent procedures (4a-ii) can create biases and certain expectations - discuss e.g., whether participants knew which intervention was the "intervention of interest" and which one was the "comparator".

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#### Does your paper address subitem 11a-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

No participants will not be privy to this information. "The current study is double masked (i.e., participant and outcomes assessor). Participants will be randomly assigned to treatment and control groups; they will not be made aware of other participants' receipt of treatment or control materials. Participants will be asked not to discuss this project outside of the intervention; delivery of the intervention or other educational materials will be virtual, limiting the ability of participants to interact with one another during the study."

11b) If relevant, description of the similarity of interventions (this item is usually not relevant for ehealth trials as it refers to similarity of a placebo or sham intervention to a active medication/intervention)

### Does your paper address CONSORT subitem 11b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Both interventions will receive "the 3-page PDF document is modeled after the CDC HPV fact sheet"

12a) Statistical methods used to compare groups for primary and secondary outcomes

NPT: When applicable, details of whether and how the clustering by care providers or centers was addressed

Does your paper address CONSORT subitem 12a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Chi-square analyses will be used to assess associations between variables reported on the baseline provider knowledge, attitudes, and practice scales. Repeated measures mixed ANOVAs will examine whether change in our outcome variables is the result of the interaction between the experimental condition (tailored intervention vs. active control) and time (at 3-time points). If no interaction emerges, we will conduct follow-up tests to determine whether any change in our outcome variables are due to one of the factors (experimental condition or time). We will calculate Mauchly's test of sphericity for each ANOVA, and the Huynh-Feldt epsilon test or Greenhouse-Geisser correction to the degrees of freedom of the F-ratio will be reported for each significant effect."

### 12a-i) Imputation techniques to deal with attrition / missing values

Imputation techniques to deal with attrition / missing values: Not all participants will use the intervention/comparator as intended and attrition is typically high in ehealth trials. Specify how participants who did not use the application or dropped out from the trial were treated in the statistical analysis (a complete case analysis is strongly discouraged, and simple imputation techniques such as LOCF may also be problematic [4]).

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# Does your paper address subitem 12a-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"We may use multiple imputation procedures to handle missing data (if applicable)."

12b) Methods for additional analyses, such as subgroup analyses and adjusted analyses

Does your paper address CONSORT subitem 12b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

We do not anticipate sub-analyses at this point.

X26) REB/IRB Approval and Ethical Considerations [recommended as subheading under "Methods"] (not a CONSORT item)

X26-i) Comment on ethics committee approval

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# Does your paper address subitem X26-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"We have learned the importance of allowing more time for IRB approval and recruitment to ensure the ability to reach enough participants when working with the target population." Our protocol has received IRB approval.

# x26-ii) Outline informed consent procedures

Outline informed consent procedures e.g., if consent was obtained offline or online (how? Checkbox, etc.?), and what information was provided (see 4a-ii). See [6] for some items to be included in informed consent documents.

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#### Does your paper address subitem X26-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Upon successful completion of the screening questions, participants will read and sign the consent form indicating that they agree to participate in the study."

"Once the participant is deemed eligible and agrees to participate, they will be provided with an information sheet (SIS) outlining that their participation is voluntary, and they can opt out at any time."

# X26-iii) Safety and security procedures

Safety and security procedures, incl. privacy considerations, and any steps taken to reduce the likelihood or detection of harm (e.g., education and training, availability of a hotline)

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#### Does your paper address subitem X26-iii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"All study data will be collected online using REDCap (Research Electronic Data Capture) [22], a password secured software application system developed to design and manage web-based databases and surveys, hosted at The University of Texas at El Paso Border Biomedical Research Center with the support of the Statistical Consulting Laboratory. All data collected will be deidentified. REDCap, a web-based platform, will be maintained by the BBRC. Data will remain stored for up to 5 years after completion of the study. Only the study team will have access to the data, as the team has received training on maintaining research data confidentiality, responsible conduct of research, and research ethics with human participants. Data will be accessed through password protected and encrypted computers."

#### **RESULTS**

13a) For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome NPT: The number of care providers or centers performing the intervention in each group and the number of patients treated by each care provider in each center

#### Does your paper address CONSORT subitem 13a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time; however, we anticipate having two groups containing approximately 75 participants each.

13b) For each group, losses and exclusions after randomisation, together with reasons

Does your paper address CONSORT subitem 13b? (NOTE: Preferably, this is shown in a CONSORT flow diagram)

\*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement and diagram.

#### 13b-i) Attrition diagram

Strongly recommended: An attrition diagram (e.g., proportion of participants still logging in or using the intervention/comparator in each group plotted over time, similar to a survival curve) or other figures or tables demonstrating usage/dose/engagement.

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# Does your paper address subitem 13b-i?

Copy and paste relevant sections from the manuscript or cite the figure number if applicable (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines and diagram.

#### 14a) Dates defining the periods of recruitment and follow-up

# Does your paper address CONSORT subitem 14a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

14a-i) Indicate if critical "secular events" fell into the study period

Indicate if critical "secular events" fell into the study period, e.g., significant changes in Internet resources available or "changes in computer hardware or Internet delivery resources"

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Does your paper address subitem 14a-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines and diagram.

14b) Why the trial ended or was stopped (early)

Does your paper address CONSORT subitem 14b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

15) A table showing baseline demographic and clinical characteristics for each group

NPT: When applicable, a description of care providers (case volume, qualification, expertise, etc.) and centers (volume) in each group

Does your paper address CONSORT subitem 15? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

#### 15-i) Report demographics associated with digital divide issues

In ehealth trials it is particularly important to report demographics associated with digital divide issues, such as age, education, gender, social-economic status, computer/Internet/ehealth literacy of the participants, if known.

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### Does your paper address subitem 15-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement quidelines.

16) For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups

#### 16-i) Report multiple "denominators" and provide definitions

Report multiple "denominators" and provide definitions: Report N's (and effect sizes) "across a range of study participation [and use] thresholds" [1], e.g., N exposed, N consented, N used more than x times, N used more than y weeks, N participants "used" the intervention/comparator at specific pre-defined time points of interest (in absolute and relative numbers per group). Always clearly define "use" of the intervention.

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#### Does your paper address subitem 16-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

# 16-ii) Primary analysis should be intent-to-treat

Primary analysis should be intent-to-treat, secondary analyses could include comparing only "users", with the appropriate caveats that this is no longer a randomized sample (see 18-i).

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Does your paper address subitem 16-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

17a) For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval)

Does your paper address CONSORT subitem 17a? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

17a-i) Presentation of process outcomes such as metrics of use and intensity of use

In addition to primary/secondary (clinical) outcomes, the presentation of process outcomes such as metrics of use and intensity of use (dose, exposure) and their operational definitions is critical. This does not only refer to metrics of attrition (13-b) (often a binary variable), but also to more continuous exposure metrics such as "average session length". These must be accompanied by a technical description how a metric like a "session" is defined (e.g., timeout after idle time) [1] (report under item 6a).

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Clear selection

#### Does your paper address subitem 17a-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

17b) For binary outcomes, presentation of both absolute and relative effect sizes is recommended

Does your paper address CONSORT subitem 17b? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

18) Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory

Does your paper address CONSORT subitem 18? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

#### 18-i) Subgroup analysis of comparing only users

A subgroup analysis of comparing only users is not uncommon in ehealth trials, but if done, it must be stressed that this is a self-selected sample and no longer an unbiased sample from a randomized trial (see 16-iii).

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subitem not at all important

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Does your paper address subitem 18-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

19) All important harms or unintended effects in each group (for specific guidance see CONSORT for harms)

Does your paper address CONSORT subitem 19? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

#### 19-i) Include privacy breaches, technical problems

Include privacy breaches, technical problems. This does not only include physical "harm" to participants, but also incidents such as perceived or real privacy breaches [1], technical problems, and other unexpected/unintended incidents. "Unintended effects" also includes unintended positive effects [2].

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subitem not at all important O O O o essential

Clear selection

#### Does your paper address subitem 19-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement quidelines.

# 19-ii) Include qualitative feedback from participants or observations from staff/researchers

Include qualitative feedback from participants or observations from staff/researchers, if available, on strengths and shortcomings of the application, especially if they point to unintended/unexpected effects or uses. This includes (if available) reasons for why people did or did not use the application as intended by the developers.

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subitem not at all important O O O essential

Does your paper address subitem 19-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

#### DISCUSSION

22) Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence

NPT: In addition, take into account the choice of the comparator, lack of or partial blinding, and unequal expertise of care providers or centers in each group

22-i) Restate study questions and summarize the answers suggested by the data, starting with primary outcomes and process outcomes (use)

Restate study questions and summarize the answers suggested by the data, starting with primary outcomes and process outcomes (use).

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subitem not at all important O O O essential

Does your paper address subitem 22-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report this based on the CONSORT statement guidelines.

"Our approach to intervention with healthcare providers is not particularly novel, nor is the intention to increase provider vaccine recommendations since it has been well-established that provider recommendation is one of the most critical factors in patient decisions to get vaccinated [23]. What is innovative in our approach, however, is how we engage with providers in our region. The initial evaluation of provider knowledge, practices, and beliefs about HPV and the HPV vaccine informed us that HPV-related knowledge among providers is high. An intervention that provides additional education on HPV, the vaccine, and cancer was thus likely to have limited benefit and would not be a valuable use of provider time. In contrast, our intervention focuses on supporting the professional development of providers in the domains of modifying their own behavior and improving communication with patients. Increasing provider awareness of biases in vaccine recommendation and delivery, increasing their comfort in discussions about sexual health topics, and supplying them with tools for addressing patient hesitancy associated with vaccination were determined by our group to be more likely to produce the desired results."

22-ii) Highlight unanswered n	•				search	
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# Does your paper address subitem 22-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report once the results have been obtained and the study is finalized.

20) Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses

# 20-i) Typical limitations in ehealth trials

Typical limitations in ehealth trials: Participants in ehealth trials are rarely blinded. Ehealth trials often look at a multiplicity of outcomes, increasing risk for a Type I error. Discuss biases due to non-use of the intervention/usability issues, biases through informed consent procedures, unexpected events.

subitem not at all important O O O essential

Does your paper address subitem 20-i? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Although this protocol has high potential to generate significant and relevant results, some limitations exist. First, and typical for studies of this type, self-report data may be incomplete or may contain bias. Study participation involved a relatively large time commitment for providers in practice, which worked against recruitment and survey completion. We may therefore be somewhat limited in our ability to conduct sub-analyses such as comparisons across provider specialties (e.g., pediatrics versus family medicine) or other participant characteristics (e.g., ethnicity or income level). As we have gathered data from healthcare providers in medicine, nursing, and pharmacy, different approaches to patient care in these professions may increase variability in the responses obtained. A pretest of HPV- and vaccine-associated practices was not done in our study. Our random assignment of participants into control and experimental groups should protect against baseline group differences, however, and we will still be able to determine the persistence of any changes in behavior regardless of participant starting point. If any group of providers demonstrates high vaccine recommendation rates at the onset of the study, it will be difficult to determine a statistically significant increase in behavior in response to the intervention. Still, identifying providers with strong recommendation practices will be of benefit to our project. Finally, we anticipate the loss of a limited number of participants through attrition over time for many possible reasons, perhaps reducing the power of our study and our data analysis capabilities at the 3- and 6-month time points."

21) Generalisability (external validity, applicability) of the trial findings NPT: External validity of the trial findings according to the intervention, comparators, patients, and care providers or centers involved in the trial

#### 21-i) Generalizability to other populations

Generalizability to other populations: In particular, discuss generalizability to a general Internet population, outside of a RCT setting, and general patient population, including applicability of the study results for other organizations

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Clear selection

#### Does your paper address subitem 21-i?

subitem not at all important

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"This study protocol outlines the methods deployed in the first-ever clinical trial to be conducted regarding HPV communication practices with healthcare providers in the US-Mexico border region. We have found that our recruitment efforts have been impacted by the high burden placed on our participant population, e.g. the little time medical professionals likely have to commit to participating in research activities outside of their existing job responsibilities."

# 21-ii) Discuss if there were elements in the RCT that would be different in a routine application setting

Discuss if there were elements in the RCT that would be different in a routine application setting (e.g., prompts/reminders, more human involvement, training sessions or other cointerventions) and what impact the omission of these elements could have on use, adoption, or outcomes if the intervention is applied outside of a RCT setting.

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Does your paper address subitem 21-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Because the protocol manuscript is being prepared for protocol publication, we do not have this information at this time, but to plan to report once the results have been obtained and the study is finalized.

#### OTHER INFORMATION

23) Registration number and name of trial registry

Does your paper address CONSORT subitem 23? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

ID NCT05120869 - ClinicalTrials.gov

24) Where the full trial protocol can be accessed, if available

Does your paper address CONSORT subitem 24? \*

Cite a Multimedia Appendix, other reference, or copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Yes, it is disclosed based on the publisher reporting guidelines: "ClinicalTrial.gov Registration Number: NCT05120869"

25) Sources of funding and other support (such as supply of drugs), role of funders

Does your paper address CONSORT subitem 25? \*

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"This manuscript was completed through funding under Grant 2U54MD007592 by the National Institute on Minority Health and Health Disparities (NIMHD), a component of NIH. A Diversity Supplement supported author JM through Grant 3U54MD007592-28S3 from the NIMHD/NIH. One of the authors (JIC) was supported by a research fellowship funded under The University of Texas Health Science Center at Houston (UTHeath) School of Public Health Cancer Education and Career Grant Development Program, National Cancer Institute/NIH Grant T32/CA057712."

X27) Conflicts of Interest (not a CONSORT item)

X2/-i) State the relation of the	e study 1	team to	wards th	ie systei	m being	evaluated	
In addition to the usual declarat relation of the study team towar authors/evaluators are distinct intervention.	ds the sy	stem be	ing evalu	ıated, i.e.	, state if	the	
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Does your paper address subitem X27-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The study team developed the intervention, and as per CONSORT-EHEALTH recommendations, we declare this as a potential conflict of interest."

#### About the CONSORT EHEALTH checklist

As a result of using this checklist, did you make changes in your manuscript? \*

yes, major changes

yes, minor changes

no

What were the most important changes you made as a result of using this checklist?
Adding minor wording to ensure all areas of the CONSORT guidelines were included and met.
How much time did you spend on going through the checklist INCLUDING making * changes in your manuscript
Approximately three hours.
As a result of using this checklist, do you think your manuscript has improved? *
yes
O no
Other:
Would you like to become involved in the CONSORT EHEALTH group?  This would involve for example becoming involved in participating in a workshop and writing an "Explanation and Elaboration" document
yes
O no
Other:

Any other comments or questions on CONSORT EHEALTH

Your answer

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