

Supplementary Table 1: RE-AIM Dimensions and selected indicators reported by the reviewed articles (n =17)

| Author/year/<br>Country               | Outcome   | Reach   | Efficacy   | Adoption   | Implementation  | Maintenance   |
|---------------------------------------|---|---|--|--|---|---|
| <b>Chodick et al</b><br>(2020) Israel | <ul style="list-style-type: none"> <li>Outcome: HPV vaccine uptake</li> </ul> | <ul style="list-style-type: none"> <li>Target Population: Mothers to 14 year-old daughters</li> <li>Behavior: Not described</li> <li>Sample (n = 21,592)</li> <li>Recruitment: No specific recruitment method was described but mothers who were members of Maccabi Healthcare Services were recruited to the study.</li> </ul> | <ul style="list-style-type: none"> <li>Uptake: 55.3% vaccine uptake in Intervention group vs 55.0% in control.</li> <li>Increased in vaccine uptake in Higher SES Facebook campaign group 55.8%</li> <li>Condition: Facebook campaign group (n=17,271) vs control condition (n=4,321)</li> <li>Assessment: Post assessment of outcome</li> <li>Vaccinated = 9551+2377=11928</li> </ul> | <ul style="list-style-type: none"> <li>Setting: Hospital setting (Maccabi Healthcare Services)</li> <li>Staff: Gynecologist developed the campaign messages</li> </ul>   | <ul style="list-style-type: none"> <li>Medium: Facebook was used to deliver the content and videos</li> <li>Theory: Inoculation theory</li> <li>Duration: No specific time frame but participants review the content on Facebook and watch the video</li> <li>Cost: Total cost of intervention not reported</li> </ul>  | <ul style="list-style-type: none"> <li>Institutionalization: No Data</li> </ul> |
| <b>Fontenot et al</b><br>(2020) USA   | <ul style="list-style-type: none"> <li>Outcome: HPV vaccine uptake</li> </ul> | <ul style="list-style-type: none"> <li>Target Population: MSM 18-26</li> <li>Behavior: unvaccinated, not up to date, no vaccine status.</li> <li>Sample (n = 42)</li> <li>Participation rate:42/54= 78%</li> <li>Recruitment: Mobile app recruitment through MSM dating app.</li> </ul>   | <ul style="list-style-type: none"> <li>Uptake: 23% vaccine uptake</li> <li>Condition: Single group pre/post-intervention</li> <li>Assessment: Pre/post assessment of outcome</li> <li>Vaccinated =10</li> </ul>  | <ul style="list-style-type: none"> <li>Setting: Communities in Boston, Massachusetts</li> <li>Staff: Intervention delivery staff was not described but hospital staff involved in the data collection process</li> </ul> | <ul style="list-style-type: none"> <li>Medium: mHealth tool</li> <li>Theory: Implementation intention theory and design thinking</li> <li>Duration: No specific time frame but participants review the mHealth tools at their own pace</li> <li>Cost: Total cost of intervention not reported but participants received \$5 gift cards plus a chance to win \$75 gift card</li> </ul> | <ul style="list-style-type: none"> <li>Institutionalization: No Data</li> </ul> |

|  |  |   |  |  |   |  |
|--|--|---|--|--|---|--|
| <p><b>Gerend &amp; Madkins et al.</b><br/>(2020) USA</p> | <ul style="list-style-type: none"> <li>• Outcome: HPV vaccine uptake</li> </ul>                        | <ul style="list-style-type: none"> <li>• Target Population: Young Sexual Minority Men 18 -25</li> <li>• Behavior: Unvaccinated</li> <li>• Sample (n = 150)</li> <li>• Participation rate: (150/155) 96.77%</li> <li>• Recruitment: Recruited participants using social media and advertisement</li> </ul> | <ul style="list-style-type: none"> <li>• Uptake: Vaccination initiation higher among the intervention group (19.4%) vs. control group (6.6%)</li> <li>• Condition: RCT: Intervention group (n=72) vs. control group (n=76)</li> <li>• Assessment: Assessed vaccination status at baseline, 3-week follow-up and 9-month follow-up assessments.</li> <li>• Vaccinated =14+5 = 19</li> </ul>                       | <ul style="list-style-type: none"> <li>• Setting: No specific setting but participants were recruited from Chicago areas.</li> <li>• Staff: No intervention delivery staff description</li> </ul>            | <ul style="list-style-type: none"> <li>• Medium: Used text messages to deliver intervention messages.</li> <li>• Theory: Information-Motivation-Behavioral Skills (IMB) model framework</li> <li>• Duration: Intervention duration or contact was daily for the first 3 weeks and changed to 1 per month for 8 months.</li> <li>• Cost: Total cost not reported but each participant could receive \$75</li> </ul>  | <ul style="list-style-type: none"> <li>• Institutionalization: No Data</li> <li>• However, 9-month follow-up was conducted</li> <li>• Attrition rate: between 4% - 7% attrition rate at 3 weeks follow up and 9% -12% at 9 months follow-up</li> </ul> |
| <p><b>Gerend et.al</b><br/>(2020) USA</p>                | <ul style="list-style-type: none"> <li>• Outcome: Increase in overall HPV vaccination rates</li> </ul> | <ul style="list-style-type: none"> <li>• Target Population: Male and female students</li> <li>• Sample (n = 799)</li> <li>• Behavior: had not yet completed the HPV vaccine series</li> <li>• Recruitment: No specific recruitment strategy described.</li> </ul>   | <ul style="list-style-type: none"> <li>• Observed a 75% increase in HPV doses.</li> <li>• Observed a trend that more HPV vaccine doses were administered to students older than 26 years of age in 2019 vs 2018</li> <li>• Intervention condition was not described but it was a single group intervention</li> <li>• Baseline assessment and post intervention assessment</li> <li>• Vaccinated =599</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: University campus</li> <li>• Staff: UHS staff consisted of physicians, physician assistants, and nurse practitioners delivered the intervention</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: Weekly social media postings (Not mention specific social media)</li> <li>• Theory: No Theory</li> <li>• Duration: Multi-intervention components which had 30-minute PowerPoint presentation</li> <li>• Intervention has 2 components: (1) student direction campaign materials (2) provider directed training and HPV vaccination encouragement</li> <li>• Intervention was limited to the first three months of the Spring semester</li> </ul> | <p>Institutionalization : No Data</p>  |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
|   |   |   |   |   | <ul style="list-style-type: none"> <li>• Cost: No data</li> </ul>   |   |
| <p><b>Kempe et al.</b><br/>(2016) USA</p> | <ul style="list-style-type: none"> <li>• Outcome: Increase HPV vaccine completion series</li> </ul>                   | <ul style="list-style-type: none"> <li>• Target Population: Parents of eligible adolescents receiving their first HPV vaccine</li> <li>• Adolescents (males and females) ages 11-17; PCO members for past 2 years<br/>Sample (n = 929)</li> <li>• Behavior: Already received 1st dose</li> <li>• Recruitment: Active enrollment with intervention group, passive enrollment in control group</li> </ul> | <ul style="list-style-type: none"> <li>• Uptake: Significant increased vaccination completion rate among intervention group compared to control group (63% vs 38% respectively)</li> <li>• Intent-to-treat analysis</li> <li>• Condition: RCT: cluster, randomized pragmatic trial (intervention n=374 or control group n=555)</li> <li>• Assessments: Two follow-up assessments</li> <li>• Vaccinated = 236+211=447</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: KPCO Clinic</li> <li>• Staff: Clinic staff including pediatric, nurses, medical assistants who helped in enrollment phase.</li> </ul>                       | <ul style="list-style-type: none"> <li>• Medium: Used text messages, email, or auto-dial:</li> <li>• Theory: No theory</li> <li>• Duration: Not specific but KPCO used an Interactive Voice Response (IVR) system, which is capable of producing multiple automated recall messages parents selected reminder recall method</li> <li>• Recalls issued for each remaining dose</li> <li>• Cost: No data</li> </ul>     | <ul style="list-style-type: none"> <li>• Institutionalization was part of the long-term plan of the researchers.</li> <li>• Series completion rates were measured 1 year after HPV dose 1 was received</li> </ul> |
| <p><b>Kim et.al</b><br/>(2020) USA</p>    | <ul style="list-style-type: none"> <li>• Outcome: measure increase/change in initiation of HPV vaccination</li> </ul> | <ul style="list-style-type: none"> <li>• Target population: Korean undergraduate and graduate female students living in the USA</li> <li>• Behavior: Had not yet received HPV vaccination</li> <li>• Sample size: (n=104)</li> <li>• Recruitment: Use student leaders, pastors and social media to recruit participants</li> </ul>  | <ul style="list-style-type: none"> <li>• Vaccine uptake: Intervention group was twice as likely to receive HPV vaccine dose compared to control group.</li> <li>• Other impact: Both condition increased knowledge.</li> <li>• Condition: intervention (n=54) and control group (n=50)</li> <li>• Assessments: Two short-term assessment (post intervention and 2-month follow-up)</li> <li>• Vaccinated 10</li> </ul>          | <ul style="list-style-type: none"> <li>• Setting: Colleges, churches, social media.</li> <li>• Staff: 3 peers paired of Korean American college women and Physicians address common misconceptions</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: Mobile web technology to deliver storytelling HPV video and emails.</li> <li>• Theory: Situation specific theoretical framework along with storytelling and communication theory</li> <li>• Duration:</li> <li>• Cost: Total cost not reported. However, each participant received \$20 gift certificate and had chance to win additional \$100 gift card</li> </ul> | <ul style="list-style-type: none"> <li>• Institutionalization: No Data</li> </ul>   |

|  |  |  |  |   |  |   |
|--|--|--|--|---|--|---|
|  |  | <ul style="list-style-type: none"> <li>Loss to follow up: Intervention group (n=9); control (n=8)</li> </ul>   |  |   |  |   |
| <p><b>Lee et al.</b><br/>(2016) USA</p>  | <p><u>• Outcome:</u><br/>Increase receipt of HPV vaccine</p>                         | <ul style="list-style-type: none"> <li>Target Population: Korean American women ages 21-29</li> <li>Behavior: No prior receipt of HPV vaccine</li> <li>Sample (n = 30)</li> <li>Recruitment: Multi-recruitment methods including brochures, flyers, advertisement on social media.</li> </ul>  | <ul style="list-style-type: none"> <li>Vaccine uptake: 30% received first dose of vaccine.</li> <li>Other impact: Increase in knowledge and intent for the vaccine.</li> <li>Condition: Single pre/post quasi-experimental design</li> <li>Assessments: Baseline and post-intervention assessment (one week)</li> <li>Vaccinated = 9</li> </ul>  | <ul style="list-style-type: none"> <li>Setting: No one specific setting. Recruited participants from churches, clinic and other community settings</li> <li>Staff: Delivery staff was not described.</li> </ul> | <ul style="list-style-type: none"> <li>Medium: Used text message, mobile phone intervention</li> <li>Theory: Fogg Behavioral and Trans-theoretical Models</li> <li>Duration: Messages delivered for 20-30 minutes each day for 7 days</li> <li>Cost: Not reported</li> </ul> | <ul style="list-style-type: none"> <li>Institutionalization: No Data</li> </ul>                       |
| <p><b>Matheson et al.</b> (2014) USA</p> | <p><u>• Outcome:</u><br/>measure increase in HPV vaccine series completion rates</p> | <ul style="list-style-type: none"> <li>Target Population: Adolescent and young adult between 11 – 22 years.</li> <li>Behavior: Patients and parent hospital visits and family initiated the vaccine.</li> <li>Sample: (n=312)</li> <li>Recruitment: Recruited during hospital visit</li> </ul> | <ul style="list-style-type: none"> <li>Vaccine uptake: 14% in intervention group completed the vaccine series compared to 0% in interested group and 3% in standard care group</li> <li>Other impact: Increased in second doses.</li> <li>Condition: Not RCT: Three aims (Intervention group n=37, interested group n =43 and standard care n =232)</li> <li>Assessments: two post intervention assessment for 2 dose and 3 dose.</li> <li>Vaccinated =5+7=12</li> </ul> | <ul style="list-style-type: none"> <li>Setting: Pediatric clinic</li> <li>Staff: Health care providers</li> </ul>   | <ul style="list-style-type: none"> <li>Medium: Third party Web-based reminder system delivered text message reminders</li> <li>Theory: No theory</li> <li>Duration: Three different text messages at different times</li> <li>Cost: Not reported</li> </ul>                  | <ul style="list-style-type: none"> <li>Institutionalization: Conducted long term follow-up</li> </ul> |

|   |  |  |   |   |   |   |
|---|--|--|---|---|---|---|
| <p><b>Mohanty et al.</b><br/>(2018) USA</p> | <p>• <u>Outcome:</u><br/>measure increases in HPV vaccine uptake</p> | <ul style="list-style-type: none"> <li>• Target Population: Male and female adolescents ages 13-18</li> <li>• Behavior: Under-vaccinated population</li> <li>• Sample: (n=155,110)</li> <li>• Recruitment: Facebook campaign was used to recruit participants</li> </ul>   | <ul style="list-style-type: none"> <li>• Vaccine uptake: 152 adolescents received vaccinations</li> <li>• Other impact: 63 participants completed 3 doses</li> <li>• Condition: No specific comparison group.</li> <li>• Assessments. Assessed participants activities through Facebook matrix and the hospital verifications.</li> <li>• Vaccinated 215</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: No specific setting but participants were recruited from Philadelphia areas.</li> <li>• Staff: Staff from the Philadelphia Department of Public Health</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: Facebook and webpage were used to deliver the intervention</li> <li>• Theory: Health Belief Model</li> <li>• Duration: Campaign was run for two weeks period.</li> <li>• Cost: Described the campaign cost (\$3,000 per advertising campaign but did not report total cost.</li> </ul> | <ul style="list-style-type: none"> <li>• Institutionalization: No data reported.</li> </ul> |
| <p><b>Ortiz et al.</b><br/>(2018) USA</p>   | <p>• <u>Outcome:</u><br/>measure HPV vaccine completion/uptake</p>   | <ul style="list-style-type: none"> <li>• Target Population: Adolescents 13-18 years</li> <li>• Behavior: Not yet initiated or completed HPV vaccine series</li> <li>• Sample: (n= 108)</li> <li>• Recruitment: Posters and fliers were used to recruited participants from community center and clinic.</li> </ul> | <ul style="list-style-type: none"> <li>• Vaccine uptake: No significant increase in HPV vaccination</li> <li>• Other impact:</li> <li>• Condition: Intervention group (n=82) and control group (n =26)</li> <li>• Assessments: Baseline and three months post intervention assessments.</li> <li>• Vaccinated. Not available</li> </ul>                             | <ul style="list-style-type: none"> <li>• Setting: Took place in 2 Southeastern US cities</li> <li>• Staff: No data available</li> </ul>   | <ul style="list-style-type: none"> <li>• Medium: Facebook was used to deliver the intervention.</li> <li>• Theory: Health Belief Model</li> <li>• Duration: During 3-month time period totaling 24 health facts</li> <li>• Cost: Total cost not reported. However, each participant received \$25 gift card.</li> </ul>                 | <ul style="list-style-type: none"> <li>• Institutionalization: No data reported.</li> </ul> |

|   |  |   |  |  |   |   |
|---|--|---|--|--|---|---|
| <p><b>Patel et al.</b><br/>(2014) USA</p>               | <p>• <u>Primary:</u><br/>determine if on-time HPV vaccine series completion would increase with use of automated message reminder system</p>   | <ul style="list-style-type: none"> <li>• Target Population: Women between ages 19-26</li> <li>• Behavior: Received first dose of vaccine.</li> <li>• Sample: (n=365)</li> <li>• Recruitment: Participants were recruited during the hospital visit</li> <li>• Inclusion and exclusion: Sufficiently described</li> <li>• Participation rate: No data</li> </ul> | <ul style="list-style-type: none"> <li>• Vaccine uptake: No increase in completion rates in intervention group (17.2%) and control group (18.9%)</li> <li>• Other impact: Older, college degree holder and having lifetime partner complete 3 doses</li> <li>• Condition: cluster-randomized study (Intervention 180 vs. control 185)</li> <li>• Assessments: Baseline assessment was based on receiving first dose of vaccination. Subsequent assessments were based on when the second or third vaccination were received.</li> <li>• Vaccinated 31+35=66</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: 9 Planned Parenthood clinics, 1 hospital family planning clinic</li> <li>• Staff: Recruitment was done by trained research staff at 10 family planning clinics across 7 US states but those who delivered the intervention was not described.</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: women selected preferred method (text, email, phone, private Facebook message, and standard mail as reminder)</li> <li>• Theory: No theory</li> <li>• Duration: Each participant received 4 messages reminder (over 32 week period)</li> <li>• Cost: No data</li> </ul>  | <ul style="list-style-type: none"> <li>• Institutionalization: Followed up the participants up to 32 weeks</li> </ul>   |
| <p><b>Piedimonte S et al.</b> (2018)<br/>USA/Canada</p> | <ul style="list-style-type: none"> <li>• outcome: Increase HPV vaccine uptake among university students after implementing an educational program and vaccination campaign.</li> </ul> | <ul style="list-style-type: none"> <li>• Target Population: University students with mean 24.79 year</li> <li>• Behavior:</li> <li>• Sample: Phase I (n=56) and phase II (n=839)</li> <li>• Recruitment: Campaign was implemented on campuses.</li> <li>• Unintended consequences were monitored and reported.</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Vaccine uptake: 29 out of 56 were vaccinated in phase I and 64 of 151 were vaccinated. Additional 957 vaccinated</li> <li>• Other impact: Increased knowledge</li> <li>• Condition: McGill University (intervention group) and Concordia University (control)</li> <li>• Assessments: Baseline assessment in phase I and follow-up assessments not stated but implied that they were done at the time they received vaccines</li> <li>• Vaccinated 1,050</li> </ul>   | <ul style="list-style-type: none"> <li>• Setting: Two university campuses.</li> <li>• Staff: 2 residents, 6 medical students</li> </ul>  | <ul style="list-style-type: none"> <li>• Medium: Social media advertising and mass emailing and posters on campus (did not specify which social media platforms – just social media advertising)</li> <li>• Theory: No theory</li> <li>• Duration: Not clearly stated</li> <li>• Cost: Total cost was not reported but the cost of vaccination was reported.</li> </ul> | <ul style="list-style-type: none"> <li>• Institutionalization: Reported 2- and 6-months follow-up assessment.</li> <li>• Program continued after the intervention.</li> </ul> |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| <p><b>Rand et al.</b><br/>(2015) USA</p> | <p>• <u>Primary:</u><br/>measure HPV vaccine dose 1 uptake after text r/r intervention sent to parents</p> <p>• <u>Secondary:</u><br/>measure uptake of HPV vaccine doses 2 and 3</p> | <ul style="list-style-type: none"> <li>• Target Population: Parents of unvaccinated adolescents (11-16)</li> <li>• Behavior: No record of HPV vaccination</li> <li>• Sample: (n=3812)</li> <li>• Recruitment: Text messages were used to invite participants</li> </ul>   | <ul style="list-style-type: none"> <li>• Vaccine uptake: intervention 16% vs. Control 13%</li> <li>• Other impact: Not reported</li> <li>• Condition: Randomized practices to intervention (n=1,893) and control group (n =1,919)</li> <li>• Assessments: Assessment was done throughout the intervention period.</li> <li>• Vaccinated 303+249=552</li> </ul>  | <ul style="list-style-type: none"> <li>• Setting: 29 pediatric clinics and 10 family medicine clinics in MCO network in up-state NY</li> <li>• Staff: Managed care organization programmer delivered the intervention.</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: Used text message reminder-recall system</li> <li>• Theory: No theory</li> <li>• Duration: Up to four text messages</li> <li>• Cost: No data</li> </ul>                            | <ul style="list-style-type: none"> <li>• Institutionalization:<br/><br/>Measured first, second and third doses meaning assessments were done up to 12 months or more but not clearly stated.</li> </ul> |
| <p><b>Rand et al.</b><br/>(2017) USA</p> | <p>• <u>Primary:</u><br/>measure the time from enrollment to receipt of HPV doses 2 and 3 (for adolescents who had already started vaccine series)</p>                                | <ul style="list-style-type: none"> <li>• Target Population: Parents of adolescents 11-17 years</li> <li>• Behavior: Not completed 2<sup>nd</sup> and 3<sup>rd</sup> doses of vaccine.</li> <li>• Sample: (n = 749)</li> <li>• Recruitment: Method not clearly stated but participants were recruited from clinics</li> <li>• Used intent-to-treat analysis</li> </ul> | <ul style="list-style-type: none"> <li>• Vaccine uptake: 48% of phone intervention vs. 40% of phone control and 49% of text intervention vs 30% of text control had received 2 HPV vaccine doses</li> <li>• Other impact: text message reminders and phone message reminders proved to be effective for the adolescents</li> <li>• Condition: two parallel, two arm RCTs (phone reminder (n=178) vs standard of care (n=180), text reminder (n=191 vs standard of care n=200)</li> <li>• Assessments: vaccine dose uptake measured during and immediately after intervention</li> <li>• Vaccinated 85+72+94+60=311</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: 3 urban primary care clinics in Rochester, NY (pediatric, medicine pediatric, family medicine).</li> <li>• Staff: Not data</li> </ul>   | <ul style="list-style-type: none"> <li>• Medium: Used phone and text message reminders</li> <li>• Theory: No theory</li> <li>• Duration: maximum of 3 reminders sent for each dose one wk apart</li> <li>• Cost: No data</li> </ul> | <ul style="list-style-type: none"> <li>• Institutionalization:<br/><br/>• intervention lasted 18 month period</li> </ul>  |

|   |  |  |  |  |  |   |
|---|--|--|--|--|--|---|
| <p><b>Richman et al. (2016) USA</b></p> | <ul style="list-style-type: none"> <li>• <u>Primary:</u> HPV vaccine series completion</li> <li>• <u>Secondary:</u> Knowledge of HPV and HPV vaccine</li> </ul>  | <ul style="list-style-type: none"> <li>• Target Population: College students between 18 – 26 years</li> <li>• Behavior: had received first HPV vaccine dose</li> <li>• Sample: (n=264)</li> <li>• Recruitment: Participants also recruited through special health education events held by study staff.</li> <li>• Participation rate: all participants completed baseline survey, 34% of intervention group completion f/u survey, 39% of control group completed f/u survey</li> </ul> | <ul style="list-style-type: none"> <li>• Vaccine uptake: Completion rates of HPV doses 2 and 3 not significantly different (53% for intervention grp vs 52% for control grp for HPV dose 2 and 34% for intervention grp vs 32% for control grp for dose 3)</li> <li>• Other impact: intervention group had significantly higher mean knowledge scores</li> <li>• Condition: Intervention (n=130) vs control (n = 134)</li> <li>• Assessments: Baseline assessments and 7 months post intervention assessment</li> <li>• Vaccinate 69+70=139</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: Large and rural university in NC</li> <li>• Staff: student center pharmacist approached and consented students into study, also administered HPV vaccine doses</li> <li>• Location of intervention was well described</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: text/email appt reminders and educational messages. Control participants received standard of care (paper card with next appt date).</li> <li>• Theory: No theory</li> <li>• Duration: Intervention group received 7 electronic messages across 7 months</li> <li>• Cost: Total cost not reported but each participant received \$10 iTunes gift card and a chance to win an Apple iPad.</li> </ul> | <ul style="list-style-type: none"> <li>• Institutionalization:</li> <li>• baseline paper survey administered at enrollment, electronic f/u survey via Qualtrics administered 7 months after HPV dose 1 receipt</li> </ul> |
| <p><b>Richman et al. (2019) USA</b></p> | <ul style="list-style-type: none"> <li>• <u>primary:</u> determine if HPV vaccine uptake can increase among low income 9-17 adolescents in rural eastern NC with electronic reminders (text/email).</li> </ul> | <ul style="list-style-type: none"> <li>• Target Population: Parent child dyads (child ages 9 - 17 years)</li> <li>• Behavior: Never vaccinated</li> <li>• Sample: (n =257)</li> <li>• Recruitment: Participants were recruited when they were at clinic to receive first dose vaccine</li> </ul>   | <ul style="list-style-type: none"> <li>• Vaccine uptake: Completion rates intervention 65% and control group 65% for HPV dose 2 and HPV dose 3 (35% vs. 30% respectively)</li> <li>• Other impact: intervention not successful at increasing HPV 3</li> <li>• Condition: Parent child dyads randomized to intervention (n=129) vs parent child dyads randomized to control (n=128)</li> </ul>  | <ul style="list-style-type: none"> <li>• Setting: 2 community clinics (1 in Pitt county, 1 in Greene county)</li> <li>• Staff: study staff trained in basic study recruitment (Pitt county clinic)</li> <li>• doctors/nurses who administer HPV vac-</li> </ul>                    | <ul style="list-style-type: none"> <li>• Medium: Used text/email appt reminders and educational messages. Control group received standard of care</li> <li>• Theory: No theory</li> <li>• Duration: Intervention group received 7 electronic messages</li> <li>• Cost: Total cost not reported but each participant received \$15 Wal-Mart gift card</li> </ul>  | <ul style="list-style-type: none"> <li>• Institutionalization:</li> <li>No data reported</li> </ul>   |



|  |  |   |   |  |   |  |
|--|--|---|---|--|---|--|
|  |  |   | <ul style="list-style-type: none"> <li>• Assessments: baseline survey administered at enrollment; electronic survey administered 7 months after HPV dose</li> </ul> <p>Vaccinated 45+38 =83</p>   | <p>cines trained in recruitment (Greene county clinic)</p>   |   |  |
| <p><b>Tull et al.</b><br/>(2019)<br/>Australia</p> | <ul style="list-style-type: none"> <li>• <u>primary:</u> determine if SMS to parents/guardians of children receiving HPV vaccine within school vaccination program could increase HPV vaccination rates within the program</li> <li>• <u>Secondary:</u> determine whether self-regulatory or motivational message strategy was more effective</li> </ul> | <ul style="list-style-type: none"> <li>• Target Population: Students and parents of adolescents of year 7 students.</li> <li>• Behavior: child had not yet completed HPV vaccine series</li> <li>• Sample: (n=4386)</li> <li>• Recruitment: Recruited parents using a list from the selected schools.</li> <li>• Used intent-to-treat analysis</li> </ul> | <ul style="list-style-type: none"> <li>• Vaccine uptake: 85.71% of students in control, 88.35% in motivational arm, and 89.00% of students in self-regulatory arm received any dose of HPV vaccine at the third school visit</li> <li>• Other impact: Extended follow-up effect was noticed.</li> <li>• Intent-to-treat analysis</li> <li>• Condition: RCT: Motivational Short Message Service (SMS) n=1442 vs. self-regulatory SMS n=1418 vs. no SMS n =1,526</li> <li>• Assessments: study completion rates measured at end of intervention (Dec 2016) and end of extended f/u period (Jan 2017)</li> <li>• 1308+1274+1262=3,844</li> </ul> | <ul style="list-style-type: none"> <li>• Setting: Schools</li> <li>• Staff: No data</li> <li>• Setting participation rate: 7 out of 12 local government immunization providers identified by research team participated</li> <li>• 31 out of 108 schools participated</li> </ul> | <ul style="list-style-type: none"> <li>• Medium: Used text messages (groups were motivational SMS vs self-regulatory SMS vs no SMS at all)</li> <li>• Theory: motivational strategy based on HBM</li> <li>• Duration: 1 reminder SMS sent 2 working days before HPV vaccine visit</li> <li>• Cost: No data</li> </ul> | <ul style="list-style-type: none"> <li>• Institutionalization: Extended f/u period for students who missed 3rd dose visit</li> </ul> |