Appendix A

RAVE Field Guide

Contents:

RAVE Observation Visit Planning Call

Clinic attendees: Site point of contact (POC) and other key practice members that the POC identifies as important for a successful observation visit.

Research team attendees: Qualitative project manager, practice enhancement research coordinator (PERC), and other research team members (e.g. Principal Investigator, qualitative lead).

Planning call objectives:
- o Build rapport with clinic contacts to help with study activities and project success…
- o Develop a preliminary understanding of clinic vaccine workflows
- o Review study survey materials
  - o Practice Survey – complete and return prior to observation visit
- o Review format of the 1.5 day site visit
  - o Confirmation on points of observation
  - o Identification of staff members for informal interviews
- o Finalize timing of observation visit

_____

Introductions and Meeting Goals

Thank you so much for joining us today. We're really looking forward to coming in person to observe how adolescent vaccines are delivered at your practice as part of the Rural Adolescent Vaccine Enterprise (aka RAVE). As one piece of this study – we're conducting observation visits with rural clinics in Oregon to understand organizational structures and practices that support high vaccination rates in rural primary care clinics. Our observations at your clinic will help our team provide technical assistance support over the next 3 years to help rural clinics and communities improve adolescent vaccination rates.

Our team has a lot of experience blending in to clinical workflows and understanding how care is delivered. The goals of today's call are to: 1) Learn a little more about your practice and 2) Finalize plans for our observation visit. Let's start with brief introductions as there are a few people on the call today.

1) I'd like people to share their name and current role as it relates to this project. I'll get us started… [share your name and role on the project. Then, ask other folks from the research team to share so the clinic knows who's on the call.]

Practice Information, Vaccination Process Overview, and Potential Community Partners

We have a few questions that we'd like to ask to help us understand how your clinic functions and the experience you've had with quality improvement projects focused on vaccination delivery. This will help us as we think about the timing and organization of the observation visit.

2) Please tell us a little about how your practice is organized
   Probes:
   - Number of clinicians
   - Staffing structure
   - EHR system – how long, what version? Any plans to change the EHR soon?

3) Since this study is about vaccination delivery, can you walk us through the vaccination process at your clinic? We're especially interested in adolescent vaccinations.
   Probes:
   - Determining who is due (How is the EHR used? How do you use ALERT IIS*?)
   - How do patients find out about their immunization status, including what vaccinations are due?
   - Who delivers the vaccines? (clinic staff, health department, other)
   - Visit-based versus population outreach workflows
   - Any challenges with different vaccines – school mandated versus otherwise?

4) Some clinics have participated in internal led or externally supported improvement efforts to increase their adolescent vaccination rates. Has your clinic participated in any improvement efforts related to adolescent vaccines? If so, please describe.
Probes:
   - Does your practice have a designated quality improvement (QI) team? Who are the QI team members? Who often / when do they meet? Are any of them related to adolescent vaccines?
   - The state provides a QI intervention called AFIX, which is focused on improving vaccines. Has your clinic ever participated in AFIX? If so, what was it like?

Another goal of the overarching RAVE study is to understand what community partners or organizations that play a role in working with clinics around vaccinations.

5) Does your clinic work with any community partners to educate parents/ children and young adults about vaccinations or to increase vaccination rates? [e.g., public health, CCOs, other?]
Probes:
   - If so, what have you done with these partners? If no, what role do you think these partners could play/who might it be?
   - What type of vaccine messaging is present in the community?

Observation Visit and Plan Review
There are three parts to our observation visit: 1) a brief survey, 2) the observation visit, and 3) sharing findings back with your clinical team.

First, we'd like to work with you to complete a brief survey about your practice. This survey has 11 questions and should take less than 5 minutes to complete. These questions help us describe the clinics that we visit. We attached a copy of the survey [in a prior email, with this appointment, etc].

6) Do you have any questions about the survey?
7) When will you be able to complete the survey? [Hopefully you've spoken about this in advance and this call gives you the opportunity to answer any questions that they have. The survey should be returned to the study team at least 1 week prior to the observation visit.]

Second, our team does a 2-day site visit to the clinic where we observe all points of clinical care – from patient check in, to rooming and care provision, to check out. Our team has substantial experience blending in during clinical care. The goal of today's call is in part to gain insight into who we should observe, to confirm the timing of our site visit makes sense (i.e., those who help with adolescent vaccinations will be in clinic that day), and to answer any questions that you have.

8) I want to confirm the timing of our visit and the plan for our first and second days. Right now it looks like we are planning to come on [Specify Dates].

We like to arrive at the clinic before patient care begin. This gives us the opportunity to see how the day starts – are there huddles, meetings, chart scrubs, etc. We've also found it works well if there's someone who can give us a brief orientation to the practice when we arrive (so that clinicians and staff know why we're there).

9) What time should we arrive and who will greet us/orient us to the practice?
10) Given we like to see all staff and clinicians involved in patient care - are there any individuals in the clinic that we should be sure to observe during our visit (panel managers, health department staff, medical assistants, etc?

Finally, after we've finished our observations we'd like to share summary of findings from observation visits across all participating clinics. For clinics that are interested, there may also be an opportunity to participate in the larger RAVE quality improvement trial to enhance target vaccine rates

11) Do you have any questions about the observation visit or what you can expect from us?

This is the end of the site visit planning call.

We'll connect the week prior to the visit to collect the Practice Survey and to remind you of the visit. Thank you for your time today!

Practice Name:	Practice Type: FM Peds	Date Returned:

RAVE: Vaccinations in Rural Oregon – Practice Survey

- Thank you for completing this ORPRN survey to better understand the way your practice delivers adolescent vaccines.
- **This survey takes 5 minutes to complete and is broken into 2 sections.**

You can complete the survey online or return the hard copy the RAVE study team via email, fax (503-494-1513), or in person. If you have questions about the survey please contact us at:
- Isabel Stock, PERC | email: stocki@ohsu.edu, phone: (971) 413-6720
- Laura Ferrara, PERC | email: ferraral@ohsu.edu, phone: (971) 413-9585

Section 1. Practice Characteristics

1. Please characterize your practice setting by checking all relevant features below:
   ☐ Clinician-owned solo or group practice
   ☐ Hospital/Health system owned
   ☐ Federally Qualified Health Center or Look-alike
   ☐ Academic health center/faculty practice
   ☐ Rural Health Clinic
   ☐ Other, please describe: _____

2. How many clinicians are associated with this practice (include MD, DO, Nurse Practitioners, Physician Assistants)?
   -please write "n/a" if your practice does not have this role.
   -please write "0" for none in the role currently (e.g. hiring)

	MD / DO
	PA
	NP / ANP
	Other (please describe):

3. How many other practice staff are involved in care for adolescents at this practice?
   -please write "n/a" if your practice does not have this role.
   -please write "0" for none in the role currently (e.g. hiring)

	Nurse
	Care Manager / Coordinator
	Medical Assistant
	Community Health Worker
	Social Worker
	Behavioral Health Specialist
	Other (please describe):

Survey continues on next page

4. Does your practice have designated quality improvement (QI) team?
   ☐ No
   ☐ Yes, please describe: _____

5. Do you have anyone on staff who is responsible for monitoring/achieving vaccine targets in your clinic?
   ☐ No
   ☐ Yes, please describe: _____

6. Do you have any staff who are responsible for population outreach to achieve vaccine targets?
   ☐ No
   ☐ Yes, please describe: _____

7. Does your practice routinely (e.g., quarterly) interact with other practice and/or community groups about public health/prevention programs, including vaccine initiatives?
   ☐ No
   ☐ Yes, please describe (and indicate the number of projects you have worked on together over the past 2 years): _____

Section 2. Patient Panel Characteristics

8. Please estimate the total number of patients seen at the practice in a typical week: _____

9. Please estimate the percentage of active patients that are children (age 0-17 years)? _____%

10. Please estimate the percent of your active patients that fall in the following categories: (Should total to100%)

Patient Race	%
White	
Black / African American	
American Indian or Alaska Native	
Asian	
Native Hawaiian or Other Pacific Islander	
Other Race / Mixed Race	
Total	*100%*

11. Please estimate the percent of your patients that fall into the following categories: (Should total to100%)

Patient Ethnicity	%
Hispanic or Latino	
Non-Hispanic or Latino	
Total	*100%*

Thank you for completing this survey. We appreciate your time!

Observation Guide

We have identified key positions in primary care practices where we can optimize our learning about how vaccines are provided, and how the EHR is used to support providers and practice staff in accomplishing relevant tasks. The site visit team will also conduct informal interviews with clinic staff in order to clarify our observations in the clinic.

We observe consecutive patients on observation days. However, if the practice has days and times when they are more likely to see children, deliver immunizations, do women's health, conduct sports physicals, or see new patients, we will make sure that we are observing the practice during these times.

Administrative Areas
Administrative areas include the waiting room, scheduling area, checkout, and billing. Review what we know about what happens in these areas (see site visit planning call), and keep observation in these areas brief as how tasks are accomplished in each of these areas tends to be repetitive, and may or may not be central to our interests.

Waiting room
- Very briefly describe the patient waiting area.
- Are there educational materials about cancer screening (e.g. pap testing), immunizations?

Scheduling and Check-In
- Briefly describe the scheduling process.
    - Briefly describe the patient check-in process, with particular attention to how the EHR is used in this process.
    - If this is where screening is done, please spend some additional time observing how screening is done, and how the EHR is used in the screening process.
    - Also, check to see if front desk staff makes any special notes or preparation for the provider when the patient checks in.
    - Spend a little time understanding how the EHR and ALERT IIS* are used to identify patients with different needs and to track patients through the visit.
    - In particular, we want to know if front desk staff check to see if patients are up-to-date on indicated immunizations, what may be done to flag, for clinical staff, important information regarding immunizations due.
    - Is educational material about vaccines given to patients/parents?
    - Pay attention to no-shows and related protocols.

Checkout
- Briefly describe check-out process using the site visit planning call as your guide.
- Briefly describe the follow-up scheduling process.
- In particular, pay attention to how patients are informed regarding when their next vaccination is due.

Point of Care
This position involves observing the direct care process, from rooming to patient-clinician encounters.

Rooming
- Describe the rooming process.
    - Who calls back the patient?
    - Do parents routinely accompany their child? For children aged 15 and older, is parental accompaniment discouraged in any way?
    - Where is the patient taken?
- Describe what the rooming MA/nurse does with the patient.
    - Does the rooming MA/nurse review chart information? Does the rooming nurse conduct a health history?

- Does the rooming MA/nurse review immunizations?
- Does the rooming MA/nurse review preventive care? Does the rooming MA/nurse discuss HPV as a cancer prevention service?
- Does the rooming MA/nurse gather information about visits the patients has had with other providers?
- **For all of these tasks, how is the EHR and ALERT IIS* used to do the task?**

- Does the rooming MA/nurse review chart information, take health history, history of present illness, family history?
- Describe prompts or alerts that are used to help remind the rooming MA/ nurse, of certain tasks s/he must do (pay particular attention to those related to immunization services).
- Pay particular attention to whether these processes are different for new patients, patients who have not seen the doctor in a while, and adolescents ages 11-17 years.
- What does the clinician do before entering the room? (Review screening, discuss with rooming MA/nurse)Describe when and how cancer preventive care and immunizations comes up in this process. Cancer risk reduction includes the use of sun screen and vaccinations.
- How does the rooming MA/nurse handle a parent who is in the visit with an adolescent patient?
- What does the rooming MA/nurse say about immunization?

Clinician Encounters
The aim is to describe how the clinical encounter unfolds in as much detail as possible. It will be very difficult to capture what is actually said, although in some cases it might be possible. In addition to the following, please note the reason for the visit.
- Describe the patient's encounter with the clinician/provider.
  - Describe the greeting.
  - If a parent is present, does the clinician primarily speak to the adolescent or to the parent?
  - Examine how the clinician negotiates the agenda.
  - How is the patient asked about their problems, if asked at all?
- Examine the clinician's behavior with the patient.
  - When is the clinician looking at the patient during conversations?
  - What other objects does the clinician attend to?
- Describe how the clinician talks about cancer preventive care.
  - How and what does s/he discuss about HPV vaccines?
  - If this does not occur, ask what prevents this from happening
- Describe how the clinician's uses the EHR.
  - Are there prompts, alerts, or other types of decision support relevant preventive health services used by the clinician?
  - Follow-up with the clinician to fill-in gaps about the EHR use, when you have a few minutes to chat. Ask the clinician to show you how s/he uses the record.
    Describe where immunizations take place.
  - Are immunizations given in exam rooms or a separate room?

Monitoring and Documentation
- How does the practice document immunizations rendered in another clinic or setting (pharmacy, health department)?
- How does the practice document refusals of services?
- What tracking tools does the practice use to identify when patients are due for follow-up vaccines?
- What type of reminders, if any, does the practice provide to patients to prompt them to come in for these services?

Points of Team-Based Care
During your first day on site, it is important for you to identify the places in the clinic where collaboration occurs among providers and providers and staff. This can include team patient care meetings, pre-session huddles, as well as centrally located work stations, or in the hallways. We want to be sure to position ourselves in these

areas to observe how teamwork is done, and to identify how the practice, as a team, may be involved in delivery of cervical cancer preventive care.

- Position yourself to observe the places where collaboration takes place in the practice in order to observe people in action.
- If there are formal patient care meetings: Make time to observe one of these meetings.
  - **Describe what happens during team meetings**. Pay particular attention to agenda setting, the roles and behaviors of leaders, the note-taking and timekeeping. Also describe how the practice does the following: process improvement work, including quality measure review and patient case discussion.

- If there are informal (hallway) patient care meetings: Make sure you are positioned to capture some of these conversations. Positioning in the hallway and shadowing providers and other key personnel should accomplish this.
  - Describe these conversations – what is discussed and what happens.
  - Describe the people (roles) in the practice that are involved in these discussions. For instance, if front desk staff are involved in conversations about patient care, we'd like to understand these conversations.

- Huddles – It is common for patient care teams to meet to discuss patients before a patient care sessions. We will determine if this is common practice in the clinic from the site visit planning call. If huddles are a common place, schedule your visit to include observing these huddles.
  - Describe who is involved in the huddles, and the roles they play; who are they led/initiated by?
    - Are they planned or impromptu?
  - Describe what happens in the huddle.
  - Describe what subsequent behaviors (preparations for the visit) the huddle stimulates.
  - Importantly, describe how the EHR or reports generated from the EHR and ALERT IIS* are used during these huddles.

Population Management / Outreach

Population management is a process of reviewing populations, identifying problems, and taking action. Population management is a shift from responding to patient-initiated demands to searching for and reaching out to patients needing care. Population management often takes the form of chart scrubbing, developing gap lists, making calls, and sending messages to patients.

- Describe what they are doing and who is doing it.
- Are there tracking systems in place?

*The **ALERT Immunization Information System (IIS)** is a statewide immunization registry developed to achieve complete and timely immunization of all Oregonians throughout their lives. ALERT collects immunization data from both public and private health care providers to create complete records for individuals in Oregon. (State of Oregon, Center for Public Health Practice – Immunization Program)

Brief Observation Checklist

Note: Questions adapted from CDC's AFIX Questionnaire. This document is not meant to replace rich, descriptive fieldnotes, but rather an at-a-glance checklist of items to watch out for and discussion points when conferring with colleagues in the field.

Activity	
Identifying patients due	
Is the immunization record checked ahead of a patient visit?	
Delivering vaccine and documentation in EHR/ALERT	
Are vaccine refusals documented in chart?	
Are immunization administered at every visit?	
Is the vaccine supply managed appropriately?	
Reminders / Recall / Scheduling	
Is there a reminder/recall process in place for annual adolescent well visits?	
Is there a system in place to recall/schedule second dose of vaccine?	
Access	
Do they offer immunization-only visits? Could also be same day or next day immunization visits, or drop ins	
Is there a system in place to reschedule no-show visits?	
Patient communication around vaccine efficacy / safety	
Is the HPV vaccination discussed with patients in a clear and effective manner?	
Are printed materials regarding the HPV vaccine available to patients?	
Performance feedback & staffing	
Are adolescent immunization rates measured and shared with staff?	
Is there an immunization "champion" at the clinic? This could potentially be a QI person or vaccine coordinator.	
Are staff trained in immunization schedules and administration?	
Community linkages	
Does the clinic collaborate on cross-agency work to increase vaccine rates? An example may include working with the local public health department on a project.	
Does the clinic utilize social media?	

Revise Form - American Journal of Preventive Medicine

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[✔] Title must be <80 chars, inc. spaces. If subtitle is used, title <50 & subtitle <60.

[✔] Title should be short, concise, and descriptive.

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Title page must include

[✔] All authors' full names (first, middle initial, last)

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Abstract must be in the following format (word count) based on manuscript type:

| Research & Brief Report: Introduction, Methods, Results, Conclusions (250 max) |

Abstract content

[✔] Years data were collected

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| Please note not all authors wish to use a middle initial |

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Use only Word docs (no text files or PDF) for submissions of text. Excel, PowerPoint, & most image formats OK for figures.

[✔] Number all lines of the text, from Introduction through References. (In Word, go to File > Page setup > Layout >   Line numbers > Add line numbering > Continuous > OK to exit.)

[✔] Except page numbers, do not use MS Word's automatic footnotes, endnotes, headers, or footers.

[✔] Number all pages in the upper right-hand corner, beginning with title page. (If title and abstract are pages 1 and 2, begin introduction at page 3.)

[✔] Use 12-point Times New Roman font for all text, including references, and tables.

[✔] Double spaced

[✔] Flush left, with 1" margins on all 4 sides.

[✔] Paragraphs should be separated with two hard returns, not tabs. (One blank, numbered line between each paragraph.)

[✔] Use only third person (no 'we' or 'our' or 'us').

Text word count (not inc. title page, abstract, tables/figures, references

| Research paper: 3,000 words maximum |

Other Notes - Formatting

References

Style for journal articles:
Vega KJ, Pina I, Krevsky B. Heart transplantation is associated with an increased risk for pancreatobiliary disease. *Ann Intern Med.* 1996;124(11):980-983.

Style for books:
Norman IJ, Redfern SJ, editors. *Mental health care for elderly people.* New York: Churchill Livingstone, 1996.

In-text referencing:

- ✔ References to be identified in order mentioned in text.
- ✔ No Word automated endnotes or references. (EndNote and Reference Manager are okay.)
- ✔ Reference #s must be manually entered in text with superscript (not parentheses), outside of punctuation.

Reference list:

- ✔ Use the correct journal abbreviations in the reference list. Must be consistent with those found in Index Medicus, https://www.ncbi.nlm.nih.gov/nlmcatalog/journals
- ✔ Include complete information for all journal articles (volume, issue, and page #s).

References for unpublished/not yet published manuscripts:

- ☐ References of manuscripts accepted but not yet published are to be designated by "In press."
- ☐ Information from manuscripts submitted but not accepted should be cited in the text as unpublished observations (J Smith, University of Minnesota, unpublished observations, 2009).
- ☐ Personal communication should NOT be given a reference number nor listed in the reference list. Instead, include in the text with parentheses as (J Smith, University of Minnesota, personal communication, 2009).
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Tables & Figures

Tables

- ☐ All significant p values should be bolded with the following note under the table. [Note: Boldface indicates statistical significance (p<0.05).] Only use asterisks to designate multiple p-value limits (*p<0.05, **p<0.01).
- ✔ Include headings for all columns (including stub)
- ✔ Table title should be <15 words.
- ✔ Footnotes in tables to be lettered (lowercase a, b, c).
- ✔ Table font should be Times New Roman.
- ✔ Number tables consecutively with Arabic numbers and cite in text in that order.

Figures

- ✔ Figures should be camera-ready, black-and-white print on white background, except for maps, which should be in color.
- ✔ Titles for all figures to be typed together on one separate page, following the reference list. No title should be included on the page with the figure.
- ✔ Use Arial (sans-serif) font.
- ✔ Figures should be numbered consecutively and cited in order in the text.

Tables & Figures

- ✔ Abbreviations, other than most common (e.g., MD, AIDS), should be expanded in a legend.
- ✔ Total table + figure count = 4 max. Any beyond this must go in online-only appendix.

Other Notes - Tables, Figures, & References

Do not use footnote letters/numbers to expand abbreviations. Simply list these below the table (e.g., HPV, human papilloma virus; UTD, up-to-date)

Before submitting your revision, please ensure:
Order of revised manuscript: title page with abstract; text; acknowledgments; reference list; and titles of figures (on one page). Submit all tables, figures, and appendices as separate documents.
Highlight changes made to the manuscript in yellow - do not use track changes.
Include cover letter explaining all changes, with specific response to reviewers' comments.
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