

Pregnancy and Immunization: A Guide to Creating Patient Materials

July 2020

Creating Effective Patient Education Materials on Maternal Immunization

The American College of Obstetricians and Gynecologists (ACOG) is a leader in providing patient education materials to pregnant women across a wide range of topics. ACOG developed this resource to highlight evidence-based considerations to support the development of patient education materials related to immunizations during pregnancy.

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Methodology

ACOG, in collaboration with APCO Worldwide (APCO), conducted an online discussion group with pregnant women to hear how they react to different forms of patient education materials. The aim was to learn what types of messaging and graphics resonate best, and what information sources are the most trusted and easy to use.

APCO's approach to meet the study objectives centered on one 90-minute, online discussion group of women across all stages of pregnancy that was held March 5, 2020 and included 25 participants. Additionally, APCO conducted an in-depth literature review and audits of health literacy best practices and existing maternal immunization patient education resources. The findings from the discussion group, literature review, and audits informed the considerations presented in this guide.

How to Use This Guide

Purpose of This Guide:

Improve health messaging and resources used to communicate to pregnant women regarding the importance of maternal immunizations.

Who Should Use This Guide:

Organizations (e.g. vaccine advocacy groups or clinician/practitioner/patient organizations) and/or health entities (e.g. health care systems or health departments) developing vaccine education materials for pregnant women. While some of the information in this guide can also be used to help support clinicians in their conversations with patients, this document is not intended to guide development of materials created by individual clinicians.

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INTRODUCTION

Pregnant women often experience a myriad of emotions. While there is often joy and excitement, they can also experience anxiety and confusion about what the right steps are to keep their growing baby* healthy. Patient education materials have the opportunity to alleviate anxiety and give each woman the confidence she needs to make the best decisions for herself and her pregnancy. This guide is specifically focused on strategies and considerations for developing patient education resources about vaccines during pregnancy (maternal immunization).

Through our discussion group, we found that 7 in 10 expectant mothers have had a conversation with their health care practitioner about the importance of vaccines during pregnancy. However, respondents noted that clinicians sometimes do not make a strong recommendation during this exchange. Most characterized the interaction as a casual conversation or offhand remarks that are followed by the distribution of a pamphlet or information sheet. For a majority of pregnant women in the discussion group, these conversations about vaccines during pregnancy are standard fare and provide a sense of safety. But that is not the case for everyone, and some find the conversation anxiety-inducing, confusing, or even scary.

Unlike prenatal vitamins, diet, and exercise, vaccines were not top-of-mind when it came to the pregnant women in the discussion group protecting their health and the health of their babies. Of those who participated, not a single woman mentioned vaccines unprompted when asked about ways to stay healthy during pregnancy.

Yet when asked specifically about the importance of vaccines during pregnancy, women in the discussion group overwhelmingly said they are “very important.” For most, the connection between their own health and the health of their baby is clear, even if the mechanism of action is unclear. For those who responded that “vaccines are only somewhat important,” the efficacy of the flu vaccine and concern about how the vaccine affects babies were the most cited reasons for hesitancy.

The information outlined above highlights the need for sound educational resources for patients to supplement conversations with clinicians regarding maternal immunization. Patient education materials addressing common concerns can help pregnant women make informed decisions about receiving vaccines during pregnancy. The following sections provide tips and considerations for creating effective maternal immunization patient education messaging and resources.

**Throughout this guide, the term “baby” is used regularly. While in certain instances “fetus” would be the more appropriate medical terminology, the use of “baby” was chosen to remain consistent with the preference highlighted by the participants in our discussion group (p.5). Additionally, when it comes to maternal immunization, the protective benefits are to the infant after birth and/or the mother.*

MATERNAL IMMUNIZATION MESSAGING

Effective communication requires developing messages and using language that your audience will understand. This section provides tips, based on findings from our discussion group, on how to develop effective messages for pregnant women so they can understand the importance of maternal immunization.

Message Framing

For the women in ACOG's discussion group, pregnancy was thought to be an entirely new or, for some, a stressful experience. It was found that a positive framing around maternal immunization was more likely to motivate pregnant women to proactively research the topic or contact their health care practitioner for more information. Expectant mothers in the discussion group were more likely to pay attention and take action if messaging focused on the positive effects that vaccines can have on their health and the health of their baby, rather than the negative effects that are risked by not getting vaccinated.

The women in ACOG's discussion group indicated that they felt more empowered and motivated by the idea that they were protecting and improving their baby's health, since they were trying to think and act positively about their pregnancy.

Yet, some in this discussion group felt reminders about the negative effects of not vaccinating were helpful to hear. For the minority of pregnant women in the discussion group who indicated that they would prefer to know the negative effects of going unvaccinated, most said they felt that a negative framing reminded them that vaccines have an important job to do to keep harmful diseases at bay, diseases that we often forget the severity of.

Terminology and Word Use

Our discussion group found that pregnant women prefer the use of the word "baby," or "developing baby," even if it is perceived as less scientifically accurate in the medical community. Participants felt that "fetus" was too cold and medically oriented, though some felt it is ok to use at the very earliest stages of pregnancy. "Unborn baby" should be avoided as it may carry the connotation that something may go wrong with the pregnancy. Terminology and phrasing used with pregnant women is important for demonstrating empathy and humanizing the message.

The following are key highlights from ACOG’s discussion group on how best to craft maternal immunization messaging:

	More Helpful Messaging	Less Helpful Messaging
Value of Vaccination	<ul style="list-style-type: none"> Positive focus on the benefits of vaccines like the “protection” and “peace of mind” they can provide 	<ul style="list-style-type: none"> Negative framing that focuses on potential complications and risks of going unvaccinated
Immunity & Antibodies	<ul style="list-style-type: none"> Introduction of the concept of “immunity” that vaccines provide Inclusion of a high-level overview of how vaccines protect babies, including the broad strokes of how vaccines create antibodies 	<ul style="list-style-type: none"> Explanations around the precise biology of how vaccines work to protect the health of a baby
Baby	<ul style="list-style-type: none"> Emphasis on the health of the baby, as this is the paramount concern Identifying that the importance of vaccination is to keep the mother healthy, which in turn supports the baby’s healthy development 	<ul style="list-style-type: none"> Frequent use of medical jargon when describing the baby and baby’s health
Society	<ul style="list-style-type: none"> Emphasis on the health of the mother and the baby 	<ul style="list-style-type: none"> Benefits of vaccination in pregnancy to the health of society—these were a distant, almost ancillary, concern

Note: While most women in ACOG’s discussion group felt that their cultural norms or preferences were not relevant to discussions about vaccines, ACOG recognizes that significant disparities exist in vaccination rates. Accordingly, health care practitioners, and organizations developing educational resources for patients, should be aware that cultural norms and preferences may impact individual vaccination decisions.¹

MATERNAL IMMUNIZATION CONTENT FORMAT & MATERIAL DISTRIBUTION

Using Visuals

Using visuals can improve communication materials when used correctly. Pictures help grab an audience's attention and help tell a story. This section overviews the best types of visuals for your materials.

Infographics

Based on our discussion group findings, **infographics are the most preferred type of imagery in patient education materials.** Many pregnant women said infographics help them to more quickly understand and better retain the information being conveyed.

Infographics are a powerful way to distill and convey complex scientific information as a visual narrative. Infographics provide an effective means to communicate health and nutrition data to decision-makers who need high-quality information but in bite-size and readily accessible forms.² Infographics and pictures of real people have shown to be a strong combination.



Pregnant? Top 3 Reasons Why You Need the Tdap Vaccine

- 1** The Tdap vaccine prevents whooping cough. This is a very serious, often life-threatening disease for babies.
- 2** Getting the Tdap vaccine during pregnancy helps protect your newborn from whooping cough until the baby is old enough for his or her own vaccine.
- 3** The Tdap vaccine is safe for both you and your fetus.

For the health of your baby:
Get the Tdap vaccine during **every pregnancy** between 27 and 36 weeks, as early in that window as possible.

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Learn more at
[ImmunizationforWomen.org](https://www.immunizationforwomen.org)

Photographs

Based on our discussion group findings, **photographs work best for showing “real-life” events, people, and emotions**—they are often more compelling for audiences. A review of immunization resources for pregnant women and health care practitioners from the CDC and other health care organizations shows that many resources use real images of pregnant women/physicians/babies.

When choosing photographs, it’s helpful to include people who represent your target audience (e.g., pregnant women, people with disabilities, ethnicity, age, gender). Distracting backgrounds should be avoided.

From our discussion group, we found that some pregnant women appreciated seeing real people or real-life actors in materials. This allowed them to relate to the images and reminded them that others are going through similar experiences.

Image resolution

Image size and resolution are directly related. It is important to use high-resolution photos in any resource that will be printed to ensure the quality of image is maintained. When printed, low resolution images may appear pixelated and blurry.



Where to Access Stock Imagery

There are several websites that provide high quality, free or low-cost imagery.

Free: Unsplash and Pexels both offer a free selection of stock imagery. Flickr is another good resource, but may come with additional restrictions and accreditations. Each image will have a disclaimer identifying whether it can be modified and distributed for commercial purposes. Images that are labeled “royalty-free” may not be free, but instead require a one-time fee to obtain the rights of the image. The term simply means the purchaser does not have to pay royalties to the owner of the image. As a best practice, always verify licensing terms prior to repurposing a stock photo.

For Purchase: Getty Images and iStock both provide a large selection of high-quality stock photos. Always check the licensing agreement and verify what is permissible for use, including frequency of use. Some licensing agreements may only permit one time use per purchase.

Illustrations³

There are certain use cases where illustrations or simple line drawings may work better than photographs. Illustrations are useful when communicating multi-step procedures or more complex ideas (e.g., a vaccine that requires multiple doses) or depicting more sensitive issues, such as severe illness in pregnant women and children as a result of a vaccine-preventable disease. Simple drawings may also be useful for disparate audiences, especially when the target audience consists of more than one cultural/ethnic group. Such drawings also are useful for showing desired actions or to address abstract subjects. However, it is important that these illustrations relate to the text explanation.

One caveat: **steer clear of abstract illustrations that may be misinterpreted.** For example, a stork delivering a baby in a basket may be confusing for some.

How to Publish

You can use different mediums depending on the audience you're trying to reach. This will ensure patients retain the information they are being given.

Print is Still King

When asked which format they prefer to receive information, most of the pregnant women in our discussion group noted they prefer printed materials (i.e. pamphlets) since it allows for review at home and at their own pace. The level of detail and information provided can also be greater than acceptable in other formats.

Digital

Digital resources, such as websites and blogs, were also a top preference among the discussion group participants, because they are always accessible and can lead to further research. One consideration for this format is that many expectant mothers felt they might forget the website details or forget to conduct research on their own after leaving their clinician's office. We recommend including reference to digital resources (i.e. website links) in printed materials to direct readers to where they may find additional or supporting information.

Of the discussion group participants, a small number noted they prefer video. Participants that chose this option shared that they learn best through visual cues.


Resource Layout & Design

When developing patient education resources, striking the right balance of content and imagery is important. The way information is laid out can determine how a resource is received by patients. Consider how you want patients to engage with your resource as you develop the content and layout. The examples on the following page provide case examples in how different resources may be perceived and utilized by pregnant women.



Vaccines During Pregnancy

Influenza (the flu) and pertussis (whooping cough) are serious illnesses, but the flu shot and the whooping cough shot (also called Tdap*) can keep you healthy and help protect your newborn. All women should get these shots during pregnancy.



THE FLU VACCINE IS

- Safe for pregnant women and their fetuses when given during any trimester of pregnancy
- Effective at preventing serious flu illness in pregnant women

HOW DOES IT PROTECT MY BABY?

- The flu vaccine creates antibodies that are passed to a fetus, which gives protection against the flu until a baby can get the flu shot at age 6 months.

THE WHOOPING COUGH (Tdap) VACCINE IS

- Safe for pregnant women and their fetuses
- Recommended between 27 weeks and 36 weeks of each pregnancy

HOW DOES IT PROTECT MY BABY?

- The Tdap vaccine creates antibodies that are passed to a fetus, which gives protection against whooping cough until a baby can get his or her first whooping cough shot at age 2 months.

VACCINES—GET THE FACTS

FACT
Pregnant women who get the flu can become much sicker than nonpregnant women who get the flu. Pregnant women with flu complications have more medical visits and more hospitalizations. The flu shot offers you the best protection.

FACT
Babies younger than 3 months have the highest risk of severe disease and of dying from whooping cough. A baby cannot be vaccinated until he or she is 2 months old, so the baby's best protection is you getting the Tdap shot during pregnancy.

FACT
Getting shots during pregnancy will not make you sick or harm your fetus. Current research shows that vaccines do not cause pregnancy problems, birth defects, or autism in children. Vaccines have been used for many years in millions of pregnant women.

PROTECT YOURSELF AND YOUR BABY. GET YOUR FLU AND WHOOPING COUGH (Tdap) SHOTS DURING EACH PREGNANCY.


Visit www.acog.org/immunization for more information on vaccines during pregnancy and other adult vaccines.

*Tdap is a shot for tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis, which is a vaccine that is given to adolescents and adults.


The most safety flu vaccine should not be used by pregnant women.

Tdap vaccine is available in a separate preparation for use in pregnant women (DTaP/Boostrix-IP) and for use in nonpregnant women (Boostrix-IP). The Boostrix-IP vaccine is not recommended for use in pregnant women.

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Frequently Asked Questions for Pregnant Women Concerning Tdap Vaccination

What is pertussis?
Pertussis (also called whooping cough) is a highly contagious disease that causes severe coughing and difficulty breathing. People with pertussis may make a "whooping" sound when they try to breathe and gasp for air. Pertussis can affect people of all ages, and can be very serious, even deadly, for babies less than a year old. In recent outbreaks, babies younger than 3 months have had the highest risk of severe disease and of dying from pertussis.

What is Tdap?
The tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine is used to prevent three infections: 1) tetanus; 2) diphtheria; and 3) pertussis.

I am pregnant. Should I get a Tdap shot?
Yes. All pregnant women should get a Tdap shot in the third trimester, preferably between 27 weeks and 36 weeks of gestation. The Tdap shot is a safe and effective way to protect you and your baby from serious illness and complications of pertussis.

When should I get the Tdap shot?
Experts recommend that you get the Tdap shot during the third trimester (preferably between 27 weeks and 36 weeks) of every pregnancy. The shot will help you make protective antibodies against pertussis. These antibodies are passed to your fetus, and protect your baby until he or she begins to get vaccines against pertussis at 2 months of age. Receiving the shot early in the 27–36 weeks-of-gestation window is best because it maximizes the antibodies present at birth and will provide the most protection to the newborn.

Is it safe to get the Tdap shot during pregnancy?
Yes. The shot is safe for pregnant women.

Can newborns be vaccinated against pertussis?
No. Newborns cannot start their vaccine series against pertussis until they are 2 months of age because the vaccine does not work in the first few weeks of life. This is one reason why newborns are at a high risk of getting pertussis and becoming very ill.

What else can I do to protect my newborn against pertussis?
Getting your Tdap shot during pregnancy is the most important step in protecting yourself and your baby against pertussis. It also is important that all family members and caregivers are up-to-date with their vaccines. Adolescent family members or caregivers should receive the Tdap vaccine at 11–12 years of age. If an adult older than 19 years/ family member or caregiver has never received the Tdap vaccine, he or she should get it at least 2 weeks before having contact with your baby. This makes a safety "cocoon" of vaccinated caregivers around your baby.

I am breastfeeding my baby. Is it safe to get the Tdap shot?
Yes. The Tdap shot can be given safely to breastfeeding women if they did not get the Tdap shot during pregnancy and have never received the Tdap shot before. There also may be added benefit to your baby if you get the shot while breastfeeding.

(see reverse)

When asked to comment on ACOG’s Vaccines During Pregnancy poster, expectant mothers in our discussion group reacted very positively to the vaccine facts that focus on safety, the brief explainer of how vaccines help protect the health of the baby, and explanations for some commonly asked questions. The layout, including fact bubbles and concise sections of information, was considered eye-catching.

By contrast, ACOG’s FAQ’s question and answer format is more text-heavy; it was considered to be useful for providing a lot of detailed information. The quality and completeness of the information is valuable, but many women in the discussion group said that it contained too much information to easily process and retain. Text-heavy materials such as this FAQ are most helpful when used as a supplement to more visually appealing and more easily processed materials.

RESOURCE DISSEMINATION

It is important to understand the various ways pregnant women access information after their appointment. Choosing the best presentation method will help ensure they have a go-to source for reliable information. This may mean adapting a resource for more than one platform or developing resources specific to a certain distribution method.

Of note, pregnant women in our discussion group regularly expressed conflicting views about the various ways they access information. As a result, the information included in the sections below is not intended to serve as strict recommendations for how to distribute and format maternal immunization messaging to pregnant women, but rather reflect the nuances of the feedback gathered during the discussion group. This information offers overarching points to consider as your organization thinks through how it can best reach pregnant women with messages around vaccination during pregnancy.

Print Materials (handouts)

Print patient education materials are foundational, preferred by most of the pregnant women in our discussion group. In terms of disseminating information, offering print materials helps to increase reach, especially when target audiences have limited access to the internet. If funds allow, make print materials available to patients.



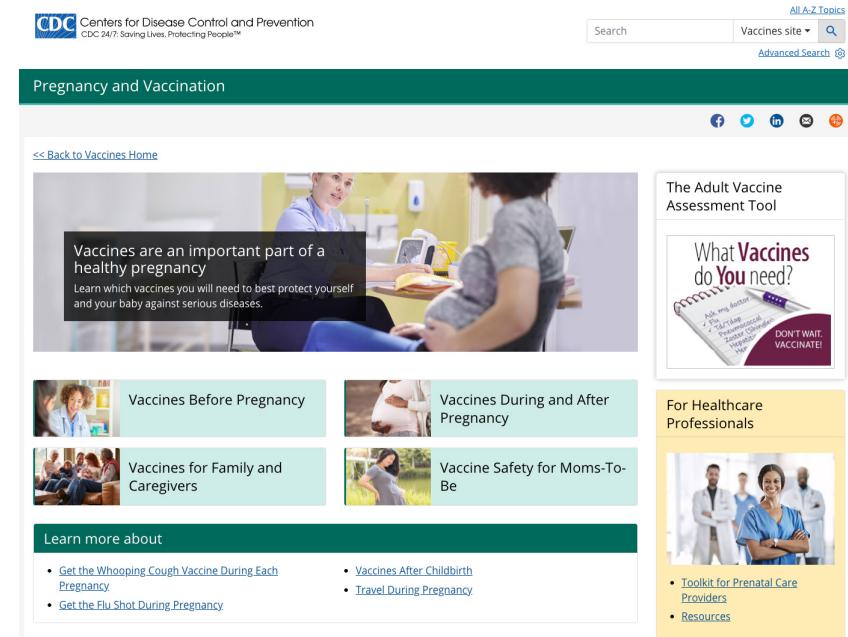
Video (animations, film)

Video programs are among the most successful strategies to improve communication and retention of information with patients. Video increases short-term knowledge and outperforms written materials, lectures, and even individual counseling.^{4,5} Some of the women in our discussion group felt that video is a good tool for engagement on websites and social media, particularly when utilized as a supplement to other patient education resources. However, it is worth noting that video may not be a feasible option for all communications due to cost and production time.

Website

More and more patients are turning to the internet to conduct their own research. Our discussion group findings show that “the internet” (i.e., Google search) was the second most common source of information (after health care practitioners) for pregnant women seeking information about vaccines.

Additionally, the CDC website was an often-referenced resource, considered by many to be a key source of information about vaccines during pregnancy. Other websites and mobile applications from WebMD, BabyCenter, and The Bump were also mentioned by the discussion group participants as key sources of information regarding pregnancy.



Social Media

Social media was a format for patient education dissemination that was particularly marked by contradiction among, and within, the discussion group participants. Based on feedback from these women, social media was not trusted by many expectant mothers as a source of information about vaccines during pregnancy, as these platforms were often seen as promoting misinformation. Despite this, a fair number of women still indicated that they used social media to find information about pregnancy and to hear from other expectant mothers and mothers about their experiences and perspectives.

Organizations should consider using social media as a supplement to other educational materials since, as mentioned above, this space is where a majority of misinformation is spread to oppose vaccinations and the facts relating to their effectiveness. The credibility of the individual or organization posting the content is paramount, and social media creates an opportunity to reach some expectant mothers, particularly when messages come from a trusted source.

Infographics and videos were noted by discussion group participants as helpful ways to format information on social media given the visual nature of the platforms.



OTHER DISCUSSION GROUP FINDINGS OF INTEREST

In addition to gathering feedback from pregnant women around their preferences related to patient education resources, the ACOG discussion group also facilitated questions around interactions with health care practitioners and their resources. These discussions were intended to get a better sense of the conversations pregnant women are having with their clinicians and how these patients are accessing information directly from them. The information below, while not explicitly related to patient education resource development, may provide insights to organizations that represent practitioners who see pregnant women and advise on vaccinations during pregnancy.

Discussions of Negative Consequences of Not Vaccinating

The pregnant women in ACOG's discussion group provided insights on how they prefer clinicians to discuss the negative consequences of going unvaccinated. Overall, they recommended that these negative consequences be stated directly, but with care:

- **Focused & Direct:** If a health care practitioner is describing the negative consequences of not getting vaccinated, most pregnant women in the discussion group suggested that the conversation should be focused on how it endangers the health of the baby. Expectant mothers wanted the information to be direct and straightforward, yet with an understanding that vaccines are a controversial and sensitive topic for some. Clinicians should be empathetic as they outline the facts.
- **Morbidity & Mortality:** Health care practitioners should approach the topic of potential death carefully. Of those participating in the discussion group, some pregnant

women felt that talking about the risk of death from vaccine-preventable diseases was unfairly used as a scare tactic to intimidate women who are already nervous about their pregnancy. Others recognized the seriousness of choosing not to vaccinate, believing it is the clinician's obligation to outline all potential risks.

Use of Practice Websites

From the discussion group, pregnant women acknowledged that they did not regularly use their health care practitioner's own website to research vaccines and pregnancy. And while many women in the group stated they would visit websites that were suggested to them by their clinician, they also acknowledged that they would have difficulty remembering the website URL to visit. To overcome this, practices might consider making evidence-based resources from trusted organizations, like CDC and ACOG, accessible and prominent on their websites to make them easier for patients to find and clinicians to recommend. (Practices should be aware that copyrighted resources may require a license or other permissions from the developed organization prior to posting on a practice website).

HEALTH LITERACY BEST PRACTICES^{3,6}

This section gives tips for deciding what to say and how to say it so the audience will understand, remember, and act on your message.

Remember that even people with advanced literacy skills may have difficulty understanding health information. The goal is to create materials that lead to increased knowledge or a change in beliefs, attitudes, or behaviors. To do this, messages must be clear, relevant, and appropriate for the intended audience. As a best practice, it is recommended that draft materials are pretested with the intended audience to ensure that your messaging is properly received and understood.

Content Guidelines

1. Give the most important information first³

To quickly engage the audience:

- Give the most important information first
- Tell them what actions to take
- Explain why it is important to them
- Make a strong recommendation

For example:

The flu is a serious illness. It can be especially dangerous for pregnant women. Women should get the flu shot during each pregnancy. The flu vaccine does “double duty” by protecting you and your baby. Babies can’t be vaccinated against the flu until they are 6 months old. When you get a flu shot during pregnancy, your body makes antibodies that transfer to your baby. These antibodies protect your newborn from the flu until he or she is old enough to get the vaccine.



2. Limit the number of messages

Give your audience no more than three or four main ideas per document or section of your document.

Focus on what your audience needs to know and do.

Skip details that are considered “nice to know.” If you are writing a brochure on the importance of the Tdap vaccine, the audience does not need to know how and when the Tdap vaccine was discovered. Rather, tell them what diseases it can prevent in order to emphasize the importance.

Stick to one idea at a time. Develop one idea fully before moving to the next idea. People are easily confused when materials skip back and forth between multiple topics.

Avoid lengthy lists. Create short lists (3-7 items) with bullets. Typically, succinct lists are easier to remember and digest, regardless of the individual’s reading level. Where possible, long lists should be broken into subheads.

3. Tell your audience what they will gain from understanding and using the material

Tell your audience how your materials will benefit them. Answer the question, “What’s in it for me?”

For example:

You will learn how to keep you and your baby safe and healthy throughout your pregnancy.

4. The way your text looks greatly affects readability

Choosing the appropriate font style and size is important in creating health communication materials that are easy to read.

- ✓ **Use:** Immunization is an essential part of care for adults.
- ✗ **Not:** *Immunization is an essential part of care for adults.*

5. Choose your words carefully

Use Plain Language. Reading levels, comprehension levels, and health literacy vary by audience. Also, many people have a difficult time understanding medical jargon regardless of their general literacy skills. To promote health literacy, use plain language that is simple and common so that any audience can understand it the first time they hear or read it.^{7,8}

Keep it short. Express only one idea in each sentence and write short paragraphs that cover one topic per paragraph.⁷

Communicate as if you were talking to a friend.

A conversational style has a more natural tone and is easy to understand.

- ✓ **Say:** You and your baby may be at risk of serious diseases.
- ✗ **Not:** Refusal to vaccinate while pregnant can result in increased risk of serious illness, disability, and even death from diseases like measles and whooping cough for the mother and child.

Limit use of jargon, technical, or scientific language. Define necessary jargon or technical terms first. Then explain them in language your audience will understand.

- ✓ **Say:** flu
- ✗ **Not:** influenza
- ✓ **Say:** birth control
- ✗ **Not:** contraception



Reading Levels

It is recommended to keep resources around a 6th or 7th grade reading level whenever possible. There are tools that can be used to measure reading levels, which can be found along with more information at the CDC.³

Text Appearance, Layout, & Formatting

Layout and Design (use of white space)

Large margins and adequate spacing between paragraphs and lines within a paragraph will provide sufficient white space and prevent a document from appearing to be “a wall of text.” Many graphic designers recommend 10 to 35 percent white space per page for print materials. In general, text should be left-justified for easy reading.³

Text Appearance (typeface, fonts)

Print in large, Serif font. To improve health literacy and ease of reading, text should be written in a serif font (i.e. Times New Roman, Garamond) with a minimum font size between 12-14 pt. Selected fonts should show a good contrast between bold and regular versions of text. It is recommended that the use of sans serif fonts (i.e. Arial) is limited to headings and subheadings only, as readability of sans serif fonts can be an issue.

Use of all capital letters should be avoided as much as possible. If used, they should be limited to titles that are consistently short (around six words or fewer). When capitalization is used in titles, it is recommended that this text also be bolded.³

For example:

Document B is easier to read than **Document A** because it has more white space.³



Formatting (bolding, bulleted lists)

Bolding words can draw attention to essential information for patients. It should be used sparingly to differentiate key sentences or phrases from the rest of the text.

For example:

The bolded phrases in **Paragraph B** are easier for the reader to pick up compared to the phrases in **Paragraph A**.

Paragraph A

Vaccines can help adults stay healthy. The flu vaccine is especially important for pregnant women. Pregnant women who get the flu are more likely to get very sick and have to go to the hospital. They also are at greater risk of losing the baby (miscarriage), having a baby who is born too early or too small, or having a baby with serious birth defects of the brain and other organs.

Paragraph B

Vaccines can help adults stay **healthy**. The **flu vaccine** is **especially important for pregnant women**. Pregnant women who get the flu are more likely to get very sick and have to go to the hospital. They also are at greater risk of losing the baby (miscarriage), having a baby who is born too early or too small, or having a baby with serious birth defects of the brain and other organs.

Bullets help to separate information from the rest of the text. Information provided in lists is often easier and faster for patients to read and comprehend.

For example:

The bulleted information in **Paragraph B** is easier for the reader to follow compared to how the information is presented in **Paragraph A**.

Paragraph A

Getting vaccines is an essential part of staying healthy. This is true for all adults, including pregnant women. The flu vaccine is especially important for pregnant women. Pregnant women who get the flu have a higher chance of getting very sick, needing to be in the hospital, losing the baby (miscarriage), having a baby with serious birth defects, and having a baby who is born too small (low birth weight).

Paragraph B

Getting vaccines is an essential part of staying healthy. This is true for all adults, including pregnant women. The flu vaccine is especially important for pregnant women. Pregnant women who get the flu have a higher chance of:

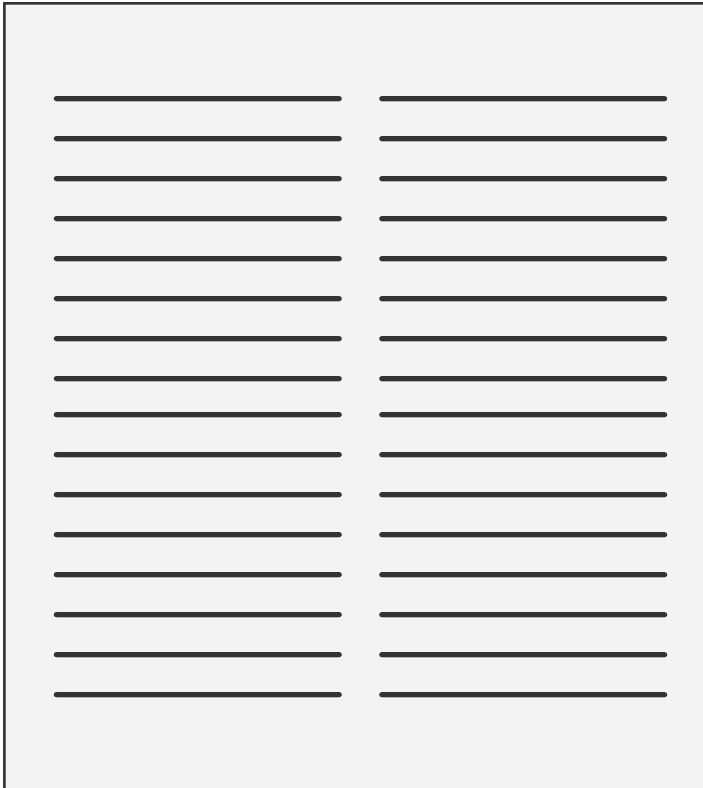
- getting very sick
- needing to be in the hospital
- losing the baby (miscarriage)
- having a baby with serious birth defects
- having a baby who is born too small (low birth weight)

Place key information in a text box. Text boxes make it easier to find the most important information on the page.

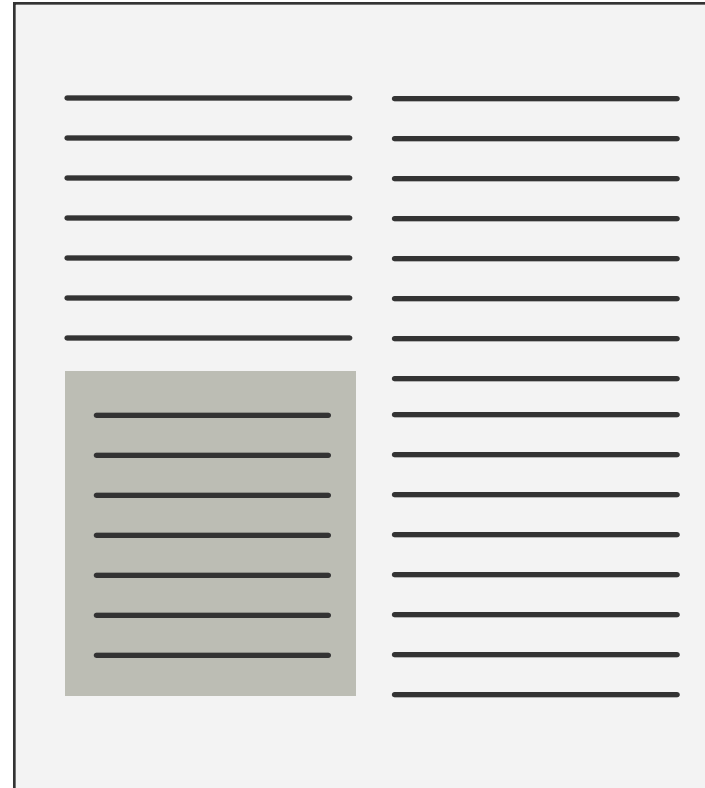
For example:

The eye is drawn to the shaded box, as shown in **Document B**.

Document A



Document B



SUMMARY

This section gives a short recap of the best practices outlined in this guide.

Do:

- Place vaccines in the context of maintaining good health for mom and baby.
- Use the word “baby” or “developing baby.”
- Make a strong recommendation.
- Use simple and straightforward language.
- Use this as an opportunity to clear up confusion and reduce anxiety.
- Talk about the positive effects of vaccines (e.g. gives protection and creates peace of mind).
- Be mindful that not everyone comes into discussions about vaccines with the same level acceptance of them.
- Describe the basic mechanism of how vaccines work to keep mom and baby healthy.
- Use printed materials as the primary distribution format.
- Use digital formats as secondary sources.
- Use infographics and pictures that use real people.
- Use simple print formats that have relatable pictures and easily digested nuggets of information.
- Use question-and-answer format where appropriate.
- Use credible sources (e.g. CDC and ACOG) with prominent branding.
- Assume some expectant mothers will seek out additional information on the internet.
- Use social media as a complement to other educational resources.
- Use images and symbols that will be familiar to your audience - it’s important to know that not all images and symbols are universal.

Don't:

- Use “unborn baby.”
 - Note: Although our discussion group found that women saw the term “fetus” as too “medical,” if used in the right context, such as in the earliest stages of pregnancy, its use can be appropriate.
- Use language that is too “scientific” or “medical” sounding, unless accompanied with plain and understandable language.
- Use scare tactics or focus solely on the negative effects of going unvaccinated.
- Rely too heavily on illustrations to convey important information.
- Use too much text or fine print.
- Rely too heavily on personal stories.
- Assume that expectant mothers will use their health care practitioner’s website, seek out articles written by experts, or listen to podcasts.

CONCLUSION

Patient education resources play a critical role in providing important information to pregnant women. Health care organizations can use this guide to create vaccine education materials for pregnant women that account for readability, understandability, and accessibility. Development of accurate, clear, and understandable resources is important for increasing uptake of vaccines during pregnancy.

ADDITIONAL RESOURCES AND APPENDICES

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⁸Office of Disease Prevention and Health Promotion. "Health Literacy Online." (June 2016). Retrieved May 26, 2020 from <https://health.gov/healthliteracyonline/table-of-contents/>.



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