

EXHIBIT 12

From: Morelli, Valerie (CDC/DDID/NCIRD/ISD)
Sent: Wed, 1 Sep 2021 17:06:14 +0000
To: Downs, Alycia E. (CDC/DDID/NCIRD/OD)
Subject: RE: Need to update vaccine definition on website

If this is for the general public I am good with the change

From: Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>
Sent: Wednesday, September 1, 2021 1:00 PM
To: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Subject: RE: Need to update vaccine definition on website

Does this definition need to be updated as well?

Vaccination: The act of introducing a vaccine into the body to produce immunity to a specific disease.

To something like:

Vaccination: The act of introducing a vaccine into the body to produce protection from a specific disease.

From: Downs, Alycia E. (CDC/DDID/NCIRD/OD)
Sent: Tuesday, August 31, 2021 4:09 PM
To: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Subject: RE: Need to update vaccine definition on website

Great. Thanks Valerie!

From: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Sent: Tuesday, August 31, 2021 4:06 PM
To: Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>
Subject: FW: Need to update vaccine definition on website

This is good to go – waiting on a final answer on the other

From: Kroger, Andrew (CDC/DDID/NCIRD/ISD) <aok2@cdc.gov>
Sent: Tuesday, August 31, 2021 3:53 PM
To: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Subject: RE: Need to update vaccine definition on website

Okay by me.

Andrew

Andrew Kroger MD, MPH
Communication and Education Branch
Immunization Services Division
National Center for Immunization and Respiratory Diseases
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Roybal Campus
1600 Clifton Road, M/S A-19
Atlanta, GA 30329-4027

From: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Sent: Tuesday, August 31, 2021 2:46 PM
To: Kroger, Andrew (CDC/DDID/NCIRD/ISD) <aok2@cdc.gov>
Subject: FW: Need to update vaccine definition on website
Importance: High

Are you ok with this change – if you open the attachment you can click on the link to the page this is relevant to – it is a general public definition page

From: Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>
Sent: Wednesday, August 25, 2021 8:25 AM
To: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Subject: RE: Need to update vaccine definition on website

Hi Valerie,

I know you are busy so I really appreciate your help. The definition of vaccine we have posted is problematic and people are using it to claim the COVID-19 vaccine is not a vaccine based on our own definition. Does the updated version look okay to you? Thank you!

Currently posted:

Vaccine: A product that stimulates a person's immune system to produce immunity to a specific disease, protecting the person from that disease. Vaccines are usually administered through needle injections, but can also be administered by mouth or sprayed into the nose.

Update to:

Vaccine: A preparation that is used to stimulate the body's immune response against diseases. Vaccines are usually administered through needle injections, but some can be administered by mouth or sprayed into the nose.

From: Downs, Alycia E. (CDC/DDID/NCIRD/OD)
Sent: Thursday, August 19, 2021 11:56 AM
To: Morelli, Valerie (CDC/DDID/NCIRD/ISD) <vxm4@cdc.gov>
Subject: Need to update vaccine definition on website

Hi Valerie,

I need to update this page [Immunization Basics | CDC](#) since these definitions are outdated and being used by some to say COVID-19 vaccines are not vaccines per CDC's own definition.

Could you take a look at the attached work doc and let me know if this looks okay to you? The mRNA language was pulled from the COVID-19 website.

Cynthia and Allison Fisher have both reviewed but I would really appreciate your help with this.

Alycia

From: Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR)
Sent: Mon, 16 Aug 2021 17:45:24 +0000
To: Downs, Alycia E. (CDC/DDID/NCIRD/OD); LaRocque, Marcie (CDC/DDID/NCIRD/OD) (CTR); St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR)
Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR); Witbart, Lauren Ann (CDC/DDID/NCIRD/OD)
Subject: RE: Who owns this page?

Hi Alycia,

Speaking for just myself—I think (b)(5)

(b)(5)

I think (b)(5)

(b)(5)

Best,
Andrew

From: Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>
Sent: Friday, August 13, 2021 4:35 PM
To: Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR) <llx2@cdc.gov>; LaRocque, Marcie (CDC/DDID/NCIRD/OD) (CTR) <lox3@cdc.gov>; St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR) <ibx9@cdc.gov>
Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR) <qvl8@cdc.gov>; Witbart, Lauren Ann (CDC/DDID/NCIRD/OD) <xap3@cdc.gov>
Subject: RE: Who owns this page?

Do you all have recommended updates for the content?

(b)(5)

Alycia

From: Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR) <llx2@cdc.gov>
Sent: Friday, August 13, 2021 3:47 PM
To: Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>; LaRocque, Marcie (CDC/DDID/NCIRD/OD) (CTR) <lox3@cdc.gov>; St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR) <ibx9@cdc.gov>
Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR) <qvl8@cdc.gov>; Witbart, Lauren Ann (CDC/DDID/NCIRD/OD) <xap3@cdc.gov>
Subject: RE: Who owns this page?

Hi Alycia,

People have been asking us if COVID-19 vaccines are not technically vaccines. They often cite that page as CDC's definition for what counts as a vaccine. Here are a few examples (more in the attached spreadsheets):

- Is it true that this shot for Covid is not actually a vaccine per your definition? Does this shot make you immune to the Covid virus? If not, why should I get the shot?
- Reading the CDC's definition of vaccine is says "...to produce immunity to a specific disease..." Everything you read today says this shot doesn't give you immunity but helps a person fight off the infection. Our question is how is the CDC and the rest of the world allowed to call the shot a vaccination when it doesn't even meet your own definition
- <https://www.cdc.gov/vaccines/vac-gen/imz-basics.htm> The definition of the word vaccine used on this page states that a vaccine produces immunity. Further, immunity is defined as being exposed to it (the pathogen) without becoming infected. There are several vaccines, including the new COVID vaccines that do not produce immunity as defined. Would it be possible for you to update the page to be more clear on the definition of a vaccine? I was directed to this page by someone attempting to use it as proof that the EUA COVID vaccines are not really vaccines since they do not provide immunity as defined on the linked page. Hopefully this can help clear up some disinformation that has been spread during the pandemic.
- Please update the definition of vaccine on your website found at <https://www.cdc.gov/vaccines/vac-gen/imz-basics.htm> People are citing this as proof that the mRNA vaccines are not really vaccines. The definition needs to include new technological advances (miriam webster has done this). Thanks
- Right-wing covid-19 pandemic deniers are using your "vaccine" definition to argue that mRNA vaccines are not vaccines: Here is the definition from the CDC website: Vaccine: A product that stimulates a person's immune system to produce immunity to a specific disease, protecting the person from that disease. Vaccines are usually administered through needle injections, but can also be administered by mouth or sprayed into the nose. The phrase "to produce immunity" was interpreted to mean "complete" or "perfect" immunity. This was twisted to claim that the existing covid-19 vaccines were not vaccines because they only prevented severe illness. I think it would be more accurate to say that a vaccine function is "to stimulate an immune response" to be clear that perfect immunity is not what defines a vaccine.

Best,
Andrew

From: Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>
Sent: Friday, August 13, 2021 3:29 PM

To: LaRocque, Marcie (CDC/DDID/NCIRD/OD) (CTR) <lox3@cdc.gov>; St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR) <ibx9@cdc.gov>

Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR) <gvl8@cdc.gov>; Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR) <llx2@cdc.gov>; Witbart, Lauren Ann (CDC/DDID/NCIRD/OD) <xap3@cdc.gov>

Subject: RE: Who owns this page?

Yes, there are a few of these pages we are reviewing.

What are the questions coming in?

Alycia

From: LaRocque, Marcie (CDC/DDID/NCIRD/OD) (CTR) <lox3@cdc.gov>

Sent: Friday, August 13, 2021 2:56 PM

To: St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR) <ibx9@cdc.gov>; Downs, Alycia E. (CDC/DDID/NCIRD/OD) <gfy4@cdc.gov>

Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR) <gvl8@cdc.gov>; Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR) <llx2@cdc.gov>; Witbart, Lauren Ann (CDC/DDID/NCIRD/OD) <xap3@cdc.gov>

Subject: RE: Who owns this page?

Adding Alycia – Alycia we've talked about this page/section of pages recently. See below.

From: St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR) <ibx9@cdc.gov>

Sent: Friday, August 13, 2021 2:53 PM

To: LaRocque, Marcie (CDC/DDID/NCIRD/OD) (CTR) <lox3@cdc.gov>

Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR) <gvl8@cdc.gov>; Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR) <llx2@cdc.gov>; Witbart, Lauren Ann (CDC/DDID/NCIRD/OD) <xap3@cdc.gov>

Subject: RE: Who owns this page?

Marcie, who own this page- [Immunization Basics | CDC?](#)

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From: Witbart, Lauren Ann (CDC/DDID/NCIRD/OD) <xap3@cdc.gov>

Sent: Friday, August 13, 2021 2:49 PM

To: St James, Jacqueline N. (CDC/DDID/NCIRD/OD) (CTR) <ibx9@cdc.gov>

Cc: Ponder, Marilyn (CDC/DDID/NCIRD/OD) (CTR) <gvl8@cdc.gov>; Lowndes, Andrew (CDC/DDID/NCIRD/OD) (CTR) <llx2@cdc.gov>

Subject: Who owns this page?

Hi Jacquie,

Does ISD/Valerie own this page: [Immunization Basics | CDC](#)? We need to work with them to update some of the content. This is causes a good number of questions to CDCINFO.

Thank you!

Lauren

Lauren Wittoart | M.Ed. | Ed.S. | MPH
NCIRD | ICSSO
VTF | Data Unit