



HHS Public Access

Author manuscript

J Womens Health (Larchmt). Author manuscript; available in PMC 2024 March 26.

Published in final edited form as:

J Womens Health (Larchmt). 2022 December ; 31(12): 1677–1685. doi:10.1089/jwh.2022.0428.

A National Communication Effort Addressing Maternal Mortality in the United States: Implementation of the Hear Her Campaign

Brittany Behm, MPH¹, Heather Tevendale, PhD¹, Sarah Carrigan, MPH¹, Christina Stone, BA^{1,2}, Kelly Morris, MPH, CHES¹, Jackie Rosenthal, MPA³

¹Division of Reproductive Health, National Centers for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia, USA.

²BeVera Solutions, Riverdale, Georgia, USA.

³Center for Global Health Office of the Director, Centers for Disease Control and Prevention, Atlanta, Georgia, USA.

Abstract

More than 700 women die each year in the United States from complications related to pregnancy, and considerable racial and ethnic disparities continue to exist. Recognizing the urgent maternal warning signs of pregnancy-related complications, getting an accurate and timely diagnosis and quality care can save lives. In August 2020, the Centers for Disease Control and Prevention, Division of Reproductive Health launched a national communication campaign called “Hear Her” to raise awareness of urgent maternal warning signs during pregnancy and in the year after pregnancy and improve communication between pregnant or postpartum people and their support systems and health care providers. Storytelling is a central strategy to the campaign, which features video stories of women’s experiences with pregnancy-related conditions to bring voices to the statistics and to help motivate action. These stories and additional campaign resources are disseminated through a website, digital media, organic (free) and paid social media, earned media, public service announcement distribution, and partners, with increased outreach to disproportionately affected communities. Partners in maternal and child health played an important role from campaign development to outreach and message dissemination. In the first year of the campaign, there were >390,000 unique visitors to the Hear Her website and 180 million impressions (number of times that content was displayed to a user) from digital and social

Address correspondence to: Brittany Behm, MPH, Division of Reproductive Health, National Centers for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 4770 Buford Highway, Atlanta, GA, 30329-4018, USA, bbehm@cdc.gov.

Authors’ Contributions

All authors confirm their authorship. B.B. led the development of the article. H.T. provided extensive editing to the content and format of the article. S.C., C.S., K.M., and J.R. provided feedback and edits to the article. All authors reviewed the article and approved the final version of the article.

Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the U.S. Centers for Disease Control and Prevention.

Merck had no role on the design, collection analysis, and interpretation of data, in writing of the article, or in the decision to submit the article for publication. The content of this article is solely the responsibility of the author(s) and does not represent the views of Merck or the CDC Foundation.

Author Disclosure Statement

No competing financial interests exist.

media. Digital media allowed the campaign to reach priority audiences at a time when news and social media had a number of other urgent public health messages related to the COVID-19 pandemic.

Keywords

communication campaign; maternal mortality; pregnancy-related deaths; Hear Her; maternal health campaign

Introduction

MORE THAN 700 WOMEN die each year in the United States from complications related to pregnancy.¹ These deaths can occur during pregnancy and up to a year after the end of pregnancy. No matter when they occur, most pregnancy-related deaths are preventable.² There are considerable racial disparities, with American Indian, Alaska Native, and Black women two to three times more likely to die from a pregnancy-related cause than White women.¹

Mass media campaigns can impact health behavior change in a population.³⁻⁵ The Division of Reproductive Health in the Centers for Disease Control and Prevention considered how a communication campaign could supplement ongoing efforts to address maternal mortality rates in the United States. A review of data from public health surveillance collected by state-based Maternal Mortality Review Committees indicated that factors contributing to maternal mortality at the patient and health care provider level included lack of knowledge of warning signs or needing to seek care, missed or delayed diagnosis, and inappropriate or delayed treatment.¹

Discussions with families who experienced a maternal loss and experts in the field highlighted both the need for friends and family, as well as health care professionals, to really listen when a person who is pregnant or postpartum raises concerns and for increased awareness of the urgent maternal warning signs. Efforts to improve patient-provider communication have been noted as an important area of focus to improve quality of maternity care and overall health.⁶ In addition, a recent meta-analysis of education campaigns for stroke symptom recognition and response demonstrates the potential for communication campaigns to educate people about symptoms or warning signs and influence intention to seek care.⁷

An environmental scan was conducted in 2019 to determine if other communication efforts related to maternal mortality were underway. The American College of Obstetricians and Gynecologists (ACOG) had a public awareness campaign titled “Every Woman. Every Time” to educate and encourage providers to help eliminate preventable maternal mortality.⁸ The Tara Hansen Foundation, a nonprofit based in New Jersey, created the “Stop. Look. Listen!” safety campaign to encourage women and families to speak up if they feel something is wrong, and for health care providers to heed those concerns.⁹ CDC aimed to design a campaign that could complement and enhance the messages that the existing campaigns offered by adding resources and bringing more national attention to the topic.

Based on this background information, CDC identified raising awareness of urgent maternal warning signs and encouraging those who support pregnant and postpartum people, including health care providers, to carefully listen to their health concerns, as key strategies for preventing pregnancy-related deaths that could be emphasized in a communication campaign. The campaign's key messages focus on the 15 urgent maternal warning signs developed by the former Council on Patient Safety in Women's Health Care (Table 1). These signs and symptoms could indicate a potentially life-threatening pregnancy-related complication that requires immediate medical attention. The campaign encourages people who are pregnant or postpartum who experience any of the urgent maternal warning signs to seek medical care right away. CDC worked closely with the Council on Patient Safety from the early stages of campaign ideation through launch and promotion to ensure the descriptions of the urgent maternal warning signs were aligned and accurate.

The "Hear Her"¹ campaign was launched in August 2020. The objectives of the Hear Her campaign are to (1) increase awareness of urgent maternal warning signs, (2) empower people who are pregnant or postpartum to speak up if they have any health concerns, (3) encourage support people to carefully listen and help them get the care they need, and (4) improve communication between health care professionals and patients. This article describes the development, implementation, and reach of the Hear Her campaign for the first year of the campaign, from August 2020 to July 2021, concluding with a description of the successes and challenges of campaign implementation.

Campaign Strategy

Priority audiences and markets

The campaign seeks to empower pregnant or postpartum people with the information they need to advocate for themselves and communicate their concerns. Although it is important to provide people who are pregnant or postpartum with the information and tools they need to communicate when something feels wrong, it is also important for their support networks and health care professionals to listen carefully to them when they express concerns and support them in getting the care they need.

Therefore, the priority audiences were identified as:

- people who are pregnant or postpartum (those who were pregnant within the last year),
- spouses, partners, parents, siblings, friends, and others who support people who are pregnant or postpartum, and
- health care professionals who interact with people who are pregnant or postpartum.

The campaign aims to reach communities that are disproportionately impacted by pregnancy-related death. We worked with subject matter experts to review regional data on pregnancy-related deaths and consumer market data to identify priority markets, specifically

¹Hear Her is a trademark of the U.S. Department of Health and Human Services.

those that had higher proportions of Black people who are pregnant or postpartum. Atlanta, Dallas, New Orleans, New York, and St. Louis were identified as priority markets.

Creative concept identification

In August 2019, CDC worked with a communication agency to develop three new creative concepts: Hear Her, Moments Matter, and Be the One (Table 2). The team also tested the Tara Hansen Foundation's "Stop. Look. Listen!" campaign as another option that could be adapted and brought to scale.

These concepts were tested in eight focus groups segmented by important priority audiences and included representation from disproportionately impacted communities. Those who support pregnant and postpartum people are an important audience for the campaign messaging, so we wanted to better understand their perspective and feedback on the concepts. Black women are three times more likely to die from a pregnancy-related complication than White women, so it was particularly important to gather feedback from and understand the reactions of Black participants to draft creative concepts.¹ As a result, two focus groups were conducted solely with Black pregnant and postpartum people and individuals who support Black pregnant and postpartum people. The remaining groups were composed of individuals from a mix of different races/ethnicities. These groups were: three groups conducted with individuals who support pregnant and postpartum people, and three groups conducted with a mix of both pregnant and postpartum people and individuals who support pregnant and postpartum people.

When asked which of the four concepts was the most inspiring and motivating, 64% of the focus group participants chose "Hear Her." When asked which print ad was most effective, 54% of the participants chose the ad for "Be the One." Key findings of the focus groups include that messaging should empower women to express concerns when something doesn't feel right, but it should not list all potential symptoms. Positive feedback for the Be the One ad was incorporated into Hear Her material development, such as using aspirational family moments to reinforce the benefit of hearing her concerns. Findings also emphasized the importance of capturing stories of women describing their experiences with a pregnancy-related complication. This contributed to the decision to produce testimonial videos as a central part of the campaign. Findings also emphasized the importance of modeling behavior of support people validating pregnant and postpartum peoples' concerns, which was later used as a strategy in the campaign's primary public service announcement (PSA).

Partner involvement

CDC engaged the expertise of partners in maternal and child health, many of whom provided input during the creative development process based on their work with similar audiences. Discussions about the campaign concept and messages were held with a wide range of organizations including professional medical associations, patient advocacy organizations, and public health organizations. Partners' feedback and perspective was incorporated into campaign planning, including making sure we addressed health care professionals' role in listening and responding to concerns appropriately, such as the potential for implicit bias that can impact quality of care. Federal partners such as the

Department of Health and Human Services, the Office of Women's Health, and the Office of Minority Health were also briefed, provided feedback on materials, and promoted the campaign through their networks.

Creative strategy

The Hear Her campaign features the stories of people who experienced serious pregnancy-related complications. Storytelling is a central strategy to the campaign, to humanize the statistics about maternal mortality and morbidity, and to help motivate action.¹⁰ The campaign launched featuring the stories of five women who had experienced pregnancy-related complications, describing their experiences with pregnancy-related complications and how they got the care they needed. Campaign materials were built around their testimonial videos and the urgent maternal warning signs.

The campaign was designed as a multiyear, multistrategy effort. Campaign resources are disseminated through a number of channels including the campaign website, paid digital media, organic (free) and paid social media, earned media (free publicity), PSA distribution, and partnership outreach (Fig. 1). The campaign website serves as the hub for all Hear Her resources.

Campaign Materials

Initial production of campaign assets occurred in October 2019. Consistent with social cognitive theory that includes the role of observational learning in human motivation and action, this campaign developed materials that use social modeling, such as testimonials from pregnant and postpartum people about advocating for themselves when something does not feel right.¹¹ Developed as a centerpiece of the campaign, five video stories of women's experiences with pregnancy-related conditions were produced. Two: 60 second PSAs and a 30 second PSA were produced using actors to portray people who had a pregnancy-related concern and were talking to their family, coworkers, and health care provider.

The Hear Her website includes information on the urgent maternal warning signs and has subpages directed toward the priority audiences (pregnant and postpartum people, friends and family, and health care professionals). The website is available in English and Spanish and as microsites that can be embedded into external organization's webpages. A microsite is a collection of resources that can be syndicated on a website and maintained by CDC.¹² As CDC updates materials, syndicated content is automatically updated on the organization's website.

Materials include printable handouts for pregnant and postpartum people to provide key information about the urgent maternal warning signs and tips for talking about concerns with a health care provider; handouts for partners, families, and friends that include the urgent maternal warning signs and tips for supporting pregnant and postpartum people; and a poster that visually represents the 15 urgent maternal warning signs using icons. These materials were later made available in more than 20 languages to improve accessibility to those with limited English proficiency. The 5 × 7 version of the handouts and the 11 × 17 version of the poster is available to order at no cost through CDC-INFO On Demand. Digital graphics and

social media images and text are available for download by partners and consumers to use on their websites or social media platforms.

In the fall of 2020, Allyson Felix, an elite track and field athlete and U.S. Olympian, joined the campaign as a spokesperson and ambassador. After surviving preeclampsia, a severe pregnancy-related complication, Ms. Felix has used her celebrity status to raise awareness of maternal health issues and advocate for Black maternal health by sharing messages of empowerment. Materials featuring Ms. Felix and her story were released in March 2021, and include a webpage, social media content, and two: 30 second PSAs in English and Spanish.

Campaign Reach

The campaign team collects and analyzes metrics across all channels that campaign resources are distributed through. These metrics are maintained in a dashboard and include the following:

- webpage analytics (*i.e.*, number of unique visitors, number of page views, number of resources downloaded);
- social media analytics on the Hear Her Facebook page and [@CDC_DRH](#) Twitter handle (*i.e.*, number of impressions, defined as the number of times that any content associated with the page was displayed to a user; number of engagements, defined as the total number of times that users reacted to, commented on, shared, or clicked on the posts);
- media reports detailing progress of ad buys and reach from earned media such as news coverage (*i.e.*, clicks to website from paid media ad, potential reach from related news article);
- and reports on the distribution of print materials (*i.e.*, number of materials distributed, geographic distribution of requests for print materials).

The dashboard also tracks qualitative feedback from partners and the public as well as summary notes on partnership efforts and notable events. This ongoing monitoring of campaign reach is critical for monitoring performance and identifying areas for improvement. In addition, evaluation activities are underway to better understand the impact of the campaign including analysis of survey data examining changes in intentions and behaviors among pregnant and postpartum people and members of their support systems who have been exposed to campaign messages.

Launch and Implementation

The campaign was launched in August 2020, amid the COVID-19 pandemic. Although there were some concerns about launching the campaign during a public health emergency, it became clear that perceived risk of COVID-19 was resulting in delayed medical care for many adults.¹³ Given that the Hear Her campaign sought to share messages on when pregnant and postpartum people should seek immediate medical care, it seemed particularly important to move forward with launching the campaign.

Organic social media

A Hear Her Facebook page was created to build a sense of community online and drive the organic sharing of social media messages. Social media posts about the campaign have also been distributed through CDC Division of Reproductive Health's Twitter account. During Campaign Year 1, the campaign had >68 million impressions of Hear Her messages and materials through Facebook and Twitter, resulting in >407,000 engagements with Hear Her posts and content.

In addition to posting messages and materials through Facebook and Twitter, the campaign team utilized several different social media strategies, including hosting social media events, sharing additional stories on social media, and engaging digital influencers to share messages. In honor of Hispanic Heritage Month in September 2020, CDC co-hosted a Twitter chat with Salud America!, a national Latino-focused organization. CDC posts specific to Hear Her that were published during the Twitter chat resulted in >671,000 impressions and nearly 8,500 engagements. Overall, among all Twitter chat participants, the chat received >44 million impressions.

In recognition of Black Maternal Health Week in April 2021, CDC Division of Reproductive Health Director Dr. Wanda Barfield and Allyson Felix participated in a discussion through Facebook around the disproportionate burden of maternal morbidity and mortality on Black women and improving maternal outcomes for all, with 446 people watching the video.

Several people reached out to the campaign team *via* email to share their personal stories of pregnancy-related complications and their support of the campaign. During Campaign Year 1, five people agreed to highlight their stories through DRH's Twitter account and Hear Her Facebook page as part of a social media strategy to amplify campaign messaging and diversify the voices of Hear Her. There were >24,000 impressions and 692 engagements of these initial five social media stories shared.

Paid media

Campaign materials were disseminated through a highly focused paid media approach designed to reach the campaign's priority audiences where they are already seeking information. Paid media tactics included digital ads on social media platforms Facebook and Instagram, as well as ads through Google, YouTube, and other digital channels that were able to target ads to priority audiences. The paid media strategy included distinct investments in priority markets to ensure reach in communities that are disproportionately impacted by pregnancy-related death. During Campaign Year 1, the campaign garnered 111 million impressions from digital ad buys, resulting in >587,000 clicks to the Hear Her website, Facebook page, and other campaign materials.

As part of the paid media strategy, the team utilized paid partnerships with digital influencers who had reach among the campaign's priority audiences. Twelve digital influencers were engaged to promote the campaign messages. Each woman expressed a strong interest in improving maternal health and several had experienced pregnancy-related complications themselves. Six influencers promoted the campaign in December 2020 and six influencers promoted the campaign in March 2021. They posted photos and short video

stories on Facebook and Instagram and linked to the Hear Her website. The influencers' social media campaign reached 1.8 million people (how many people saw one of the social media posts) and resulted in 2,250 clicks to the Hear Her website.

Earned media

Earned media is usually gained through a press release or other outreach efforts. A press release was issued when the campaign was launched in August 2020 and resulted in a variety of national news coverage including Good Morning America, Fox News, and Parents[®] Magazine. A second press release was issued in March 2021 when materials featuring Allyson Felix were released. The campaign continued to garner significant media interest in the first year, particularly when it was included in broader news articles focusing on maternal mortality in the United States and related health disparities. Hear Her received 545 media mentions during its first year estimated to reach >590,000 people based on data from Cision, a public relations and earned media software company and services provider.

PSA distribution

PSAs were shared with national and local TV networks, radio stations, and streaming services for consideration of donated ad space. From August 2020 through February 2021, PSAs were run on at least 462 stations.

Partnerships

Partners also played a critical role in the implementation of the Hear Her campaign. The campaign team made a concerted and strategic effort to identify partner organizations that could amplify the campaign messaging and engaged them as the campaign launched. Within the first days of launch, organizations such as professional associations, consumer parenting outlets, and patient advocacy organizations shared campaign messages through social media and newsletters to their networks to reach pregnant and postpartum people, those who support them, and health care professionals. In Campaign Year 1, two newsletters were distributed to campaign partners highlighting newly available campaign materials.

Co-branding was another strategy to leverage partnerships and increase the reach and impact of campaign messages. New York and Texas Health Departments, as well as the nonprofit 4th Trimester Project[™], co-branded materials for use in regional settings. Based on preliminary numbers from these organizations, these partnerships resulted in millions of additional impressions. State and local health departments can request to add their websites and/or logos to the materials through CDC's State and Community Health Media Center.¹⁴

Website

The English Hear Her website received a total of 584,928 page views in Campaign Year 1. About 400,000 of these page views included viewing content beyond the homepage, meaning users accessed more of the core campaign messaging. There were >390,000 unique visitors to the English Hear Her website.

The Spanish Hear Her website received >106,000 page views from >85,000 unique visitors during the first year of the campaign. The most popular page for both English and Spanish

website was the urgent maternal warning signs page. Excluding the homepage, 39% of English page views and 78% of Spanish page views were of the urgent maternal warning signs page.

There were >8,200 downloads of the Hear Her materials (including urgent maternal warning signs poster, flyers, social media, and shareable graphics) during the first year of the campaign. The urgent maternal warning signs poster developed in June 2021 features a brief description of each warning sign and is one of the most popular materials, with >1,200 downloads in June and July 2021. The most downloaded versions of the urgent maternal warning signs poster were English (981), Spanish (132), Arabic (23), and Haitian-Creole (21).

Lessons Learned

Preventing maternal mortality is an issue that has widespread support not only among public health organizations, but in the broader landscape as well.¹⁵⁻¹⁷ Launching the Hear Her campaign during a time of increased national interest and news coverage about pregnancy-related deaths likely contributed to the campaign's success. Feedback from the public and partners was widely well received. There was significant reach from sharing the campaign resources through social media and other organic (unpaid) channels after launch of the campaign. We believe the positive reception is because the campaign goals align with a universal desire to prevent mothers from dying during or after pregnancy.

CDC did receive feedback that there needed to be more messaging to health care professionals on their role in listening to people who are pregnant or postpartum. The campaign launched with a range of materials for people who are pregnant or postpartum, their support networks, and for health care professionals. However, the focus on the women's stories may have had the unintended consequence of appearing to put the burden on the people who are pregnant or postpartum to speak up. Implicit racial/ethnic biases can influence patient-provider interactions, treatment decisions, treatment adherence, and patient health outcomes.¹⁸ To more directly reach health care professionals, the campaign team released additional materials in January 2022 and is continuing to develop resources that represent and reach all the priority audiences. This includes health care professionals in the fields of obstetrics, pediatrics, emergency medicine, and primary care.

The use of primarily digital dissemination methods was a strategy that maximized the relatively limited campaign budget. Digital media buys are generally less expensive than out-of-home media buys (such as billboards and print ads) and are an efficient vehicle for reaching our priority audiences.¹⁹ Digital media allows for more targeted placement of campaign resources, ensuring advertisements and social media posts are reaching our intended audiences. In addition, the campaign was launched during the COVID-19 pandemic, which altered consumer behaviors in unprecedented ways.²⁰ Digital media allowed us to continue reaching priority audiences at a time when news and social media were saturated with urgent public health messages related to the COVID-19 pandemic.

Engaging a celebrity who has invested interest in the topic proved to be a strategy with measurable impacts for the campaign. Social media posts and paid ads that featured Allyson Felix consistently performed among the top two engaging topics on Twitter and Facebook. There may have been higher recognition of Ms. Felix in campaign materials during the summer of 2021 when she was competing in the Tokyo Olympics and became the most decorated U.S. track and field athlete in Olympics history.

Conclusion

The launch of the Hear Her campaign got to priority audiences and was shared by professional medical associations, public health partners, patient advocacy organizations, consumer parenting outlets, and the public. We have heard from members of the public, through email and social media outreach, that the tone and messaging have resonated with them and their families. In Campaign Year 1, there were >390,000 unique visitors to the Hear Her website and 180 million impressions from digital and social media. Partners in maternal and child health played a critical role from campaign development to outreach and message dissemination.

The campaign continues to generate lessons to inform ongoing campaign development and implementation. Since the time period described in this article, additional stories from people who experienced serious pregnancy-related complications have been incorporated into social media content. A suite of materials for health care professionals has also been developed and disseminated. The campaign team is currently working to develop additional materials that reflect the diversity of pregnant and postpartum people in the United States, including a suite of materials featuring stories of American Indian and Alaska Native people.

Acknowledgments

The Hear Her campaign is dedicated to the memory of women lost to pregnancy-related complications and to their families, with the hopes of preventing future deaths.

The authors thank the women who shared their stories of pregnancy-related complications with this campaign. Their generosity helps to support other women across the country to be heard and get the care they need.

The authors also thank CDC's subject matter experts and leadership who provided insight and expertise throughout the process. In addition, the authors thank the American College of Obstetricians and Gynecologists and all the public health partners who provided guidance and ongoing support with this project.

The authors are grateful to the CDC Foundation for their partnership in this work. CDC Foundation provided support utilizing a grant from Merck, through its Merck for Mothers initiative.

The authors thank the creative agency, MarketVision, for their significant contributions to the campaign, including the ideation, development, and testing of the original concepts, and the development and implementation of initial campaign materials.

Funding Information

The activities discussed in this article were supported by funding to the CDC Foundation from Merck, through its Merck for Mothers initiative. Merck for Mothers is known as MSD for Mothers outside the United States and Canada. The grant number is MFM-20-109044.

References

1. Petersen EE, Davis NL, Goodman DA. Vital signs: Pregnancy-related deaths, United States, 2011–2015, and strategies for prevention, 13 states, 2013–2017. *MMWR Morb Mortal Wkly Rep* 2019;68(18):423–429; doi: 10.15585/mmwr.mm6818e1 [PubMed: 31071074]
2. Davis NL, Smoots AN, Goodman DA. Pregnancy-related deaths: Data from 14 U.S. Maternal Mortality Review Committees, 2008–2017. Atlanta 2019. Available from: <https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/mmr-data-brief.html> [Last accessed: September 23, 2022].
3. Wakefield MA, Loken B, Hornick RC. Use of mass media campaigns to change health behaviour. *Lancet* 2010; 376(9748):1261–1271. [PubMed: 20933263]
4. Murphy-Hoefer R, Davis KC, King BA, et al. Association between the tips from former smokers campaign and smoking cessation among adults, United States, 2012–2018. *Prev Chronic Dis* 2020;17.
5. Anker AE, Feeley TH, McCracken B, et al. Measuring the effectiveness of mass-mediated health campaigns through meta-analysis. *J Health Commun* 2016;21(4):439–456. [PubMed: 26953782]
6. Attanasio L, Kozhimannil KB. Patient-reported communication quality and perceived discrimination in maternity care. *Med Care* 2015;53:863–871. [PubMed: 26340663]
7. Tan J, Ramazanu S, Liaw SY, et al. Effectiveness of public education campaigns for stroke symptom recognition and response in non-elderly adults: A systematic review and meta-analysis. *J Stroke Cerebrovasc Dis* 2022;31(2): 106207. [PubMed: 34844126]
8. Every Mom, Every Time Pin. The American College of Obstetricians and Gynecologists 2022 Available from: <https://www.acog.org/store/products/merchandise/every-mom-every-time-pin> [Last accessed: September 23, 2022].
9. Stop. Look. Listen! Rutgers Robert Wood Johnson Medical School. Available from: https://www.rwjms.rutgers.edu/RURWJ_SSLAnmatedPDF_FIN/html5.html [Last accessed: September 16, 2022].
10. Hinyard LJ, Kreuter MW. Using narrative communication as a tool for health behavior change: A conceptual, theoretical, and empirical overview. *Health Educ Behav* 2007, 34, 777–792. [PubMed: 17200094]
11. Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall; 1986.
12. Get Hear Her on Your Website: Microsites and Content Syndication. Centers for Disease Control and Prevention 2022. Available from: <https://www.cdc.gov/hearher/resources/microsites-content-syndication.html> [Last accessed: August 30, 2022].
13. Findling MG, Blendon RJ, Benson JM. Delayed care with harmful health consequences—Reported experiences from national surveys during coronavirus disease 2019. *JAMA Health Forum* 2020; doi:10.1001/jamahealthforum.2020.1463
14. State and Community Health Media Center. Centers for Disease Control and Prevention 2021. Available from: <https://nccd.cdc.gov/schmc/apps/ExploreCampaignDetails.aspx?CampaignID=270> [Last accessed: June 27, 2022].
15. (CDC) Division of Reproductive Health. At a Glance 2022. Updated March 23, 2022. Available from: <https://www.cdc.gov/chronicdisease/resources/publications/aag/womens-reproductive-health.htm> [Last accessed: September 16, 2022].
16. White House Blueprint for Addressing the Maternal Health Crisis. Washington 2022. Available from: <https://www.whitehouse.gov/wp-content/uploads/2022/06/Maternal-Health-Blueprint.pdf> [Last accessed: September 16, 2022].
17. Johnson K, Zephrin L. Congressional Proposals to Address the Maternal Health Crisis Offer a Promising Roadmap for Change. Georgetown University Health Policy Institute Center for Children and Families 2021. Available from: <https://ccf.georgetown.edu/2021/10/22/congressional-proposals-to-address-the-maternal-health-crisis-offer-a-promising-roadmap-for-change/> [Last accessed: September 16, 2022].

18. Hall WJ, Chapman MV, Lee KM, et al. Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *Am J Public Health* 2015;105(12):e60–e76; doi:10.2105/AJPH.2015.302903
19. Mullen J Reaching Moms in the Digital Era. *Maternal Health: Strategies and Tools for Reaching Moms*. National Conference on Health Communication, Marketing and Media, August 2017.
20. Nielsen. COVID-19: Tracking the Impact on Media Consumption. 2020. Available from <https://www.nielsen.com/insights/2020/covid-19-tracking-the-impact-on-media-consumption/> [Last accessed: September 16, 2022].

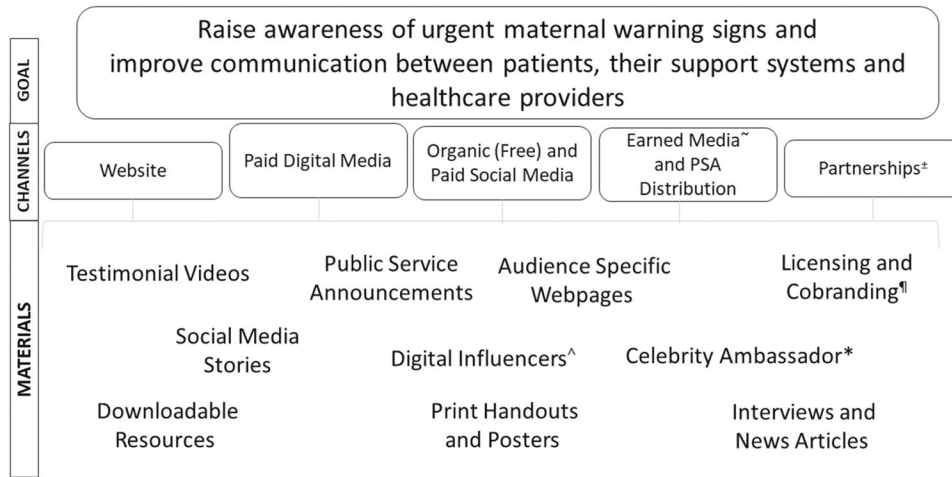


FIG 1. This figure shows the variety of channels used to promote the Hear Her campaign resources.

^a Earned media is free publicity, usually gained through a press release or other promotional efforts. It often refers to news coverage.

^b Partnerships include working with agencies, health departments, and organizations that have an interest in improving maternal health.

^c Licensing and co-branding refers to the ability for organizations to add their logo and/or website to campaign materials with the intention of disseminating the co-branded materials through print, web, and/or digital and social media channels.

^d Digital influencers are people who are considered influential on their respective social media platforms and are paid to post content about the campaign.

^e A celebrity ambassador is a public figure who appeared in campaign materials and provided public support of the campaign, such as in the news media. For the first year of the campaign, Allyson Felix, an elite track and field athlete and U.S. Olympian, was the celebrity ambassador.

Table 1.

Urgent Maternal Warning Signs




Urgent maternal warning signs ⁶	Description
1. Headache that won't go away or gets worse over time	<ul style="list-style-type: none"> • Feels like the worst headache of your life • Lasts even after treatment with medication and fluid intake • Starts suddenly with severe pain—like a clap of thunder • Throbs and is on one side of your head above your ear • Comes with blurred vision or dizziness
2. Dizziness or fainting	<ul style="list-style-type: none"> • You faint or pass out • You have dizziness and lightheadedness that's ongoing, or comes and goes over many days • You experience a gap in time of which you have no memory
3. Changes in your vision	<ul style="list-style-type: none"> • You see flashes of light or bright spots • You have blind spots or you can't see at all for a short time • Your vision is blurry, you can't focus, or you're seeing double
4. Fever of 100.4°F or higher	<ul style="list-style-type: none"> • You have a temperature of 100.4°F (38°C) or higher
5. Extreme swelling of your hands or face	<ul style="list-style-type: none"> • Swelling in your hands makes it hard to bend your fingers or wear rings • Swelling in your face makes it hard to open your eyes all the way—they feel and look puffy • Your lips and mouth feel swollen or you have a loss of feeling This swelling is not like the usual slight swelling that most moms have during pregnancy, especially during the last few months of pregnancy
6. Thoughts about harming yourself or your baby	<ul style="list-style-type: none"> • You may think about hurting yourself because you: <ul style="list-style-type: none"> – Feel very sad, hopeless, or not good enough – Don't feel that you have control over your life – Feel extremely worried all the time • You may think about hurting your baby and/or you may have scary thoughts that come when you don't want or that are hard to get rid of
7. Trouble breathing	<ul style="list-style-type: none"> • You feel short of breath suddenly or over time, as if you can't breathe deeply enough to get enough air in your lungs • Your throat and/or chest feel tight • You have trouble breathing when you're laying down flat, such as needing to prop your head up with pillows to sleep

Urgent maternal warning signs	Description
8. Chest pain or fast-beating heart	<ul style="list-style-type: none"> • You have chest pain, such as: <ul style="list-style-type: none"> – A feeling of tightness or pressure in the center of your chest – Pain that travels to your back, neck, or arm • You have a change in your heartbeat, such as: <ul style="list-style-type: none"> – A fast heartbeat or a pounding in your chest – An irregular heart rate or skipped heartbeats • You feel dizzy, faint, or disoriented • You have trouble catching your breath (talking and breathing are difficult) These symptoms can happen at any time and anywhere or may be triggered by a specific event
9. Severe nausea and throwing up	<ul style="list-style-type: none"> • You feel severely sick to your stomach (nauseous) beyond the normal queasy feeling and throwing up that many moms have in early pregnancy • You are unable to drink for more than 8 hours or eat for more than 24 hours • You throw up and can't keep water or other fluids in your stomach • You have: <ul style="list-style-type: none"> – A dry mouth – Headaches – Confusion – Fever – Dizziness or lightheadedness
10. Severe belly pain that doesn't go away	<ul style="list-style-type: none"> • You have a sharp, stabbing, or cramp-like belly pain that doesn't go away • Your belly pain starts suddenly and is severe, or gets worse over time • You have severe chest, shoulder, or back pain
11. Baby's movement stopping or slowing during pregnancy	<ul style="list-style-type: none"> • You feel that your baby has stopped moving or your baby is moving less than before • There is no specific number of movements that is considered normal, a change in your baby's movement is what is important
12. Vaginal bleeding or fluid leaking during pregnancy	<ul style="list-style-type: none"> • You have any bleeding from your vagina that is more than spotting—like a period • You have fluid leaking out of your vagina • You have vaginal discharge that smells bad
13. Heavy vaginal bleeding or discharge after pregnancy	<ul style="list-style-type: none"> • You have heavy bleeding—soaking through one or more pads in an hour • You pass clots bigger than an egg or you pass tissue

Urgent maternal warning signs ⁴	Description
•	You have vaginal discharge that smells bad
14. Severe swelling, redness or pain of your leg or arm	<ul style="list-style-type: none"> • Anytime during pregnancy or up to 6 weeks after birth <ul style="list-style-type: none"> – You have swelling, pain, or tenderness in your leg, usually your calf or in one leg: <ul style="list-style-type: none"> – It may or may not hurt when you touch it – It may hurt when you flex your foot to stand or walk – The painful area can also be red, swollen, and warm to the touch • You have pain, tenderness or swelling in your arm, usually on just one side of your body
15. Overwhelming tiredness	<ul style="list-style-type: none"> • You are suddenly very tired and weak, not like chronic fatigue • You don't have enough energy to go about your day • No matter how much you sleep, you don't feel refreshed • You feel so tired that you don't get up to take care of your baby • You feel sad after having your baby

⁴The warning signs were developed by the former Council on Patient Safety in Women's Health Care, now housed on the Alliance for Innovation on Maternal Health (AIM) Program website. Available from: <https://safehealthcareforeverywoman.org/council/patient-safety-tools/urgent-maternal-signs/>

Table 2. Four Creative Concepts Tested with Focus Groups when Determining Campaign Theme

Concept Name	Examples of Concept
Hear Her	
Moments Matter	
Be the One	

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Concept Name	Examples of Concept
Stop. Look. Listen!	