Hard Pill to Swallow

Antibiotic Resistance

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PR Plan 2: Proactive Plan

I. EXECUTIVE SUMMARY:

Our plan addresses the growing problem of antibiotic resistant bacteria. We aim to convey to our key publics the fact that antibiotics are often unnecessarily prescribed to treat illnesses that do not require them, resulting in a new "super bacteria" able to resist antibiotics. As a result, conditions that were once treatable with antibiotics are now more serious.[1]

Although the data has existed for quite some time, the Centers for Disease Control and Prevention's "Get Smart"[2] and Oregon Health Authority's "AWARE"[3] campaign has failed to change the issue. Antibiotics are still widely overprescribed and requested, and most of the general population remains unaware of the issue.[4]

Our goal is to reduce the use and over-prescription of antibiotics in cases where they are not necessary. For our plan, we aim to educate two key publics: parents of young children and grandparents. We have selected those demographics because they have been identified as opinion leaders and are primary decision makers in the lives of children.

For our first key public, we set an awareness objective and an acceptance objective. For the awareness objective, we aim to increase awareness about antibiotic resistance by 25 percent among parents of young children as measured by pre- and post-event surveys. For the acceptance objective, we plan to increase acceptance of limiting antibiotic use by seven percent as measured by email surveys among parents of young children by December 2016. We plan to reach them through organizational performance and interpersonal communication.

For our second key public, we will use an awareness objective. We will increase awareness about overuse of antibiotics among grandparents by 25 percent as measured by mail surveys conducted pre and post YMCA partnership campaign. We plan to reach them through traditional news media such as newspapers.

II. ISSUE OVERVIEW:

Antibiotics are defined as a type of antimicrobial agent made from a mold or bacterium that kills or slows the growth of other bacteria, used in certain medical treatments. Examples include penicillin and streptomycin.[5] While antibiotics can be life-saving, taking them when they are not needed can be extremely harmful.[6] Whenever a person takes antibiotics, only some

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[1] Center for Disease Control and Prevention (n.d.). Fast Facts. CDC. Retrieved February 16, 2016 from http://www.cdc.gov/getsmart/community/about/fast-facts.html
[2] Ibid; CDC Fast Facts
[3] Oregon Health Authority (n.d.) Antibiotic Resistance (AWARE). Oregon Public Health. Retrieved February 16, 2016 from http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/index.aspx
[4] Alliance for Prudent Use of Antibiotics (2014). General Facts About Antibiotic Resistance. Tufts University. Retrieved March 2, 2016 from http://www.tufts.edu/med/apua/about_issue/about_antibioticres.shtml
[5] Center for Disease Control and Prevention (n.d.) Glossary. CDC. Retrieved February 16, 2016 from http://www.cdc.gov/getsmart/community/about/glossary.html
[6] Center for Disease Control and Prevention (n.d.). Fast Facts. CDC. Retrieved February 16, 2016 from http://www.cdc.gov/getsmart/community/about/fast-facts.html

bacteria are killed, leaving the rest to grow and multiply, resulting in antibiotic-resistant bacteria[7] Overusing and over-prescribing antibiotics is beginning to render them useless, causing problems for people infected with illnesses that were once easily treated with antibiotics.[8] When antibiotics are misused, symptoms worsen and infections become longer, resulting in severe illness or even death.[9]

Each year in the United States alone, over 2 million people become ill and over 23,000 die as a direct result of these infections.[10] "Many more die from other conditions which were complicated by an antibiotic-resistant infection."[11] Part of the reason is that while antibiotics cure infections caused by bacteria, they have no effect against viral infections such as the flu or common cold.[12] Antibiotics should only be prescribed for bacterial infections, such as strep throat, pneumonia, or certain types of ear infections.[13]

An estimated 80-90 percent of antibiotics are prescribed for oral use in primary care.[14] Antibiotics are most often prescribed for "respiratory conditions (over 40 percent), skin or mucosal conditions (18 percent) and urinary tract infections (nine percent)."[15] One study discovered that among patients prescribed antibiotics, broad-spectrum antibiotics were more likely to be prescribed that narrow-spectrum antibiotics, particularly for infections it is seldom used to treat, such as bronchitis.[16] More than 25 percent of prescriptions are for conditions in which antibiotics are rarely indicated.[17] The study also urged antibiotic stewardship interventions targeting respiratory and nonrespiratory conditions in ambulatory care.[18]

However, antibiotic resistance may have manifested not only in reducing people's ability to fight disease, but in our susceptibility to other conditions.[19] Antibiotic resistance "may be to

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[7] Ibid; CDC (n.d.). Fast Facts.
[8] Ibid; CDC (n.d.). Fast Facts.
[9] Ibid; CDC (n.d.). Fast Facts.
[10] Oregon Health Authority (n.d.) Antibiotic Resistance (AWARE) Get Smart Week. Oregon Public Health. Retrieved February 16, 2016 from http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/getsmartweek.aspx
[11] Healio, Infectious Diseases In Children (2010). CDC Officials want physicians to 'get smart' about antibiotic use. Healio. Retrieved February 25, 2016 from http://www.healio.com/pediatrics/practice-management/news/print/infectious-diseases-in-children/%7B6dce1214-df0a-4358-9c1b-4009ea021a28%7D/cdc-officials-want-physicians-to-get-smart-about-antibiotic-use
[12] Oregon Health Authority (n.d.) Antibiotic Resistance (AWARE). Oregon Public Health. Retrieved February 16, 2016 from http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/index.aspx
[13] Wilson, Jacque (May 21, 2014). When You Need Antibiotics- and when you don't. CNN. Retrieved March 2, 2016 from http://www.cnn.com/2014/05/21/health/antibiotics-virus-bacteria/
[14] Shallcross, Laura J.; Davies, Dame Sally C (2014). Antibiotics overuse: a key driver of antimicrobial resistance. British Journal of General Practice. Vol. 64, no. 629 604-605. Retrieved February 16, 2016 from http://bjgp.org/content/64/629/604
[15] Shapiro, Daniel J; et al (2013). Antibiotic prescribing for adults in ambulatory care in the USA, 2007-09. Journal of Antimicrobial Chemotherapy. Retrieved February 16, 2016 from https://jac.oxfordjournals.org/content/early/2013/07/24/jac.dkt301.full.pdf
[16] Ibid; Shapiro (2013), Antibiotic prescribing for adults in ambulatory care
[17] Ibid; Shapiro (2013), Antibiotic prescribing for adults in ambulatory care
[18] Ibid; Shapiro (2013), Antibiotic prescribing for adults in ambulatory care
[19] Blaser, Martin (August 25, 2011). Antibiotic overuse: Stop the killing of beneficial bacteria. Nature. 476, 393-394. Retrieved February 16, 2016 from http://scholar.google.com/scholar_url?url=http://184.182.233.151/rid%3D1LHFCJ4D2-2DYSDVR-4S0H/Beneficial%2520bacteria.doc&hl=en&sa=X&scisig=AAGBfm0ZzdS2mmT0DfQ3XYVKVi5-LgGfXg&nossl=1&oi=scholarr

partially to blame for an influx in conditions such as obesity, type 1 diabetes, inflammatory bowel disease, allergies and asthma, all of which have increased dramatically."[20]

This is not a recent problem, the first recognized instance of antibiotic resistance offered a decade after the introduction of penicillin.[21] However, it has become more dire in the past 20 years due to the lack of new antibiotics being created.[22] Moreover, antibiotic resistance is not only a problem in the United States, but across the globe.[23] Antimicrobial resistance spreads through international and overseas travel, allowing resistant bacteria to grow and breed. Hospitals in particular are breeding grounds for antibiotic-resistant bacteria, although they only account for 20 percent of human usage.[24] Also, antibiotics are often prescribed to animals, such as pets, during basic treatment with little understanding of how they could impact humans.[25]

In particular, children are deemed to be the most at risk for antibiotic resistance. Not only are their rates higher, but they have fewer choices due to the fact that they may be too young for certain medications.[26] One study concluded that an estimated "27.4 percent of American children with respiratory tract infections actually have bacterial illnesses."[27] However, the study also found that antibiotics are prescribed in about 57 percent of doctor's visits relating to acute respiratory tract infection.[28] The earlier that antibiotics are started, the more profound the effects. The average child in the United States has received 10-20 rounds of antibiotics by the time he or she is 18 years old.[29]

Although the public has become more aware of the antibiotic resistance issue, overprescription still occurs at an alarming rate.[30] One possible reason is that doctors may simply be prescribing them before receiving the results of a medical examination, and therefore do not properly diagnose the infection.[31] Another reason is that people demand quick relief from symptoms, and pressure their doctors to prescribe what they believe to be an easy fix to a non-bacterial infection.[32] A 1998 study revealed that physicians cited parental expectations to receive antibiotics as a major factor influencing their tendency to overprescribe.[33]

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[20] Ibid; Blaser (2011). Antibiotic overuse: Stop the killing of beneficial bacteria.

[21] Shallcross, Laura J.; Davies, Dame Sally C (2014). Antibiotics overuse: a key driver of antimicrobial resistance. British Journal of General Practice. Vol. 64, no. 629 604-605. Retrieved February 16, 2016 from http://bjgp.org/content/64/629/604

[22] Ibid; Shallcross et al (2014). Antibiotics overuse: a key driver of antimicrobial resistance.

[23] Ibid; Shallcross et al (2014). Antibiotics overuse: a key driver of antimicrobial resistance.

[24] Ibid; Shallcross et al (2014). Antibiotics overuse: a key driver of antimicrobial resistance.

[25] Ibid; Shallcross et al (2014). Antibiotics overuse: a key driver of antimicrobial resistance.

[26] Ibid; Center for Disease Control and Prevention (n.d.). Fast Facts. CDC.

[27] Ibid; McNamee, David (September 15, 2014). Antibiotics are "overprescribed" among children for respiratory infections. Medical News Today. Retrieved February 16, 2016 from http://www.medicalnewstoday.com/articles/282542.php

[28] Ibid; McNamee (2014). Antibiotics are "overprescribed" among children for respiratory infections.

[29] Ibid; Blaser, Martin (2011) Antibiotic overuse: Stop the killing of beneficial bacteria

[30] Mayo Clinic (n.d.) Antibiotics: Misuse Puts You and Others At Risk. Mayo Clinic. Retrieved February 16, 2016 from http://www.mayoclinic.org/healthy-lifestyle/consumer-health/in-depth/antibiotics/art-20045720

[31] Ibid; Mayo Clinic (n.d.) Antibiotics: Misuse Puts You and Others At Risk.

[32] Ibid; Mayo Clinic (n.d.) Antibiotics: Misuse Puts You and Others At Risk.

[33] Barden, Louise S., MEd; Dowell, Scott, MD; Schwartz, Benjamin, MD. (1998). Current Attitudes Regarding Use of Antimicrobial Agents: Results from Parents' and Physicians' Focus Group Discussions. Clinical Pediatrics vol 37 no. 11. Retrieved February 16, 2016 from http://cpj.sagepub.com/content/37/11/665.short#cited-by

In any case, hope is on the horizon as new methods emerge. At Duke Health, "a newly discovered blood test allows doctors to determine if a patient with a respiratory illness is suffering from a bacterial infection or a viral infection."[34] However, the results are delayed approximately 10-12 hours, and it will be a long time before this method becomes mainstream.[35]

III. SITUATIONAL OVERVIEW:

In 2003, the Get Smart Program launched as a campaign to "reduce antimicrobial use in the community, by educating providers about proper prescribing practices."[36] Every year, "Get Smart About Antibiotics" week takes place targeting a key element that contributes to the overprescription and misuse of antibiotics. The key element is to educate healthcare providers, patients, and strategic partners. To accomplish this, the campaign "[educated] patients through traditional media such as flyers, handouts, posters and fact sheets. They were given to patients by doctors in their healthcare setting."[37] During 2008 and 2009, the campaign expanded internationally to reach legislation in Europe, Kenya and Nairobe.[38]

"In 2004, Get Smart began to collaborate between state public health and veterinary communities and help implement community-based programs on appropriate antibiotic use in animals."[39]

"FDA data from 2010 reveal that 80 percent of antibiotics sold in the US were intended for use in animals."[40] In this process, copious amounts of antibiotics would be common practice for feedlots and poultry, and swine houses. This multiplied bacteria levels in animals that are ingested by a human, but are resistant to human drugs.[41]

While many angles were taken to reach parents and the public, the issue wasn't being grasped by their targeted public. "In 2009, the CDC launched a companion program called Get Smart for Healthcare that focuses on appropriate antibiotic use in acute care facilities."[42]

A shocking statement by Dr. Arjun Srinivasan of the Centers for Disease Control started off Get Smart About Antibiotics Week 2012 with a frightening bang. "Although previously unthinkable, the day when antibiotics do not work is upon us. We are already seeing germs that are stronger than any antibiotics we have to treat them."[43]

The Get Smart program is about the correct and limited usage of antibiotics, which was revamped by addressing it as a national issue. On March 27th, 2015, the Obama Administration

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[34] Echavez, Charissa (January 21, 2016). New Blood Tests Prevent Overusing Antibiotics. The Science Times. Retrieved February 16, 2016 from http://www.sciencetimes.com/articles/8242/20160121/new-blood-test-prevents-overusing-antibiotics.htm
[35] Ibid; Echavez (2016), New Blood Tests Prevent Overusing Antibiotics
[36] Ibid; Healio (2010), CDC Officials want physicians to 'Get Smart'
[37] Ibid; Healio (2010), CDC Officials want physicians to 'Get Smart'
[38] Ibid; Healio (2010), CDC Officials want physicians to 'Get Smart'
[39] Ibid; Healio (2010), CDC Officials want physicians to 'Get Smart'
[40] Mellon, Margaret (2013). CDC's "Get Smart About Antibiotics" Campaign Still Ignoring Animals. Union Of Concerned Scientists. Retrieved February 25, 2016 from http://blog.ucsusa.org/margaret-mellon/cdcs-get-smart-about-antibiotics-campaign-still-ignoring-animals-30
[41] Ibid; Mellon (2013), CDC's "Get Smart" Campaign Still Ignoring Animals
[42] Luque, Luis M. (2015). Conversation with the Director on Antibiotics: Less Is More. Center for Disease Control and Prevention. Retrieved February 23, 2016 from http://www.cdc.gov/about/cdcdirector/conversations/hicks.html
[43] Ibid; Luque (2015), Conversation with the Director on Antibiotics, CDC.

"released a national action plan to combat antibiotic- resistant bacteria."[44] The President's Advisory Council created five goals to be initiated nation-wide in order to conquer the overarching goal, "Slow the Emergence of Resistant Bacteria and Prevent the Spread of Resistant Infections."[45] The most effective way for the U.S government to achieve a wide reach with their action plan such is to create strategic partnerships. As a U.S government organization, they have partnered with foreign governments, individuals, and organizations to strengthen the overall public and private healthcare for individuals, including veterinary medicine, agriculture, food safety, and research and manufacturing.[46] Together, all five goals will be accomplished over a proposed five-year initiative:

- "Strengthen National One-Health Surveillance Efforts to Combat Resistance"[47]
- "Advance Development and Use of Rapid and Innovative Diagnostic Tests for Identification and Characterization of Resistant Bacteria"[48]
- "Accelerate Basic and Applied Research and Development for New Antibiotics, Other Therapeutics, and Vaccines"[49]
- "Improve International Collaboration"
- And improve "Capacities for Antibiotic Resistance Prevention, Surveillance, Control, and Antibiotic Research and Development"[50]

For the first goal, the plan is "to strengthen the national one-health surveillance efforts to combat resistance the strategies the CDC have installed tasks surrounding the improvement of prescription practices across all healthcare settings."[31] The goal that we hope to reach is preventing "the spread of drug-resistant threats in healthcare facilities and communities."[31] These goals hope to be implemented by 2020.[51]

For the second goal, the plan includes improving detection and control of antibiotic resistance in human and animal pathogens will be achieved through "a "One-Health" approach to disease surveillance that integrates data from multiple monitoring networks.[52] This approach is aimed to increase the compiled data about antibiotic resistance. Achieving high quality information is "necessary to track resistance bacteria in diverse settings in a timely fashion."[53]

For the third goal, new technology will be developed and used routinely among doctor's visits that will drive "diagnostic tests that can be used during a healthcare visit to distinguish between viral and bacterial infections and identify bacterial drug susceptibilities."[54] This goal is slated to be achieved by the year 2020.

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[44] Office of the Press Secretary (2015). Fact Sheet: Obama Administration Releases National Plan to Combat Antibiotic-Resistant Bacteria. The White House. Retrieved February 23, 2016 from https://www.whitehouse.gov/the-press-office/2015/03/27/fact-sheet-obama-administration-releases-national-action-plan-combat-ant

[45] Ibid; The White House (2015)
[46] Ibid; The White House (2015)
[47] Ibid; The White House (2015)
[48] Ibid; The White House (2015)
[49] Ibid; The White House (2015)
[50] Ibid; The White House (2015)
[51] Ibid; The White House (2015)
[52] Ibid; The White House (2015)
[53] Ibid; The White House (2015)
[54] Ibid; The White House (2015)

For the fourth goal, "the Action Plan will boost basic scientific research, attract greater private investment, and facilitate clinical trials in order to advance the discovery and development of new antibiotics and alternative therapies to combat resistance. Antibiotics that lose their effectiveness for treating human disease through antibiotic resistance must be replaced with new drugs."[55]

For the fifth goal, "The United States will engage with international ministries and institutions to strengthen national and international capacities to detect, monitor, analyze, and report antibiotic resistance; provide resources and incentives to spur the development of therapeutics and diagnostics for use in humans and animals; and strengthen regional networks and global partnerships that help prevent and control the emergence and spread of resistance."[56]

The goals that are implemented are projected to see a significant outcomes by 2020, including the reduction of excessive antibiotic use by 50 percent in outpatient settings and by 20 percent in inpatient settings.[57] The National Advisory Council would also like to see an "Establishment of State Antibiotic Resistance (AR) Prevention (Protect) Programs in all 50 states to monitor regionally important multidrug resistant organisms and provide feedback and technical assistance to healthcare facilities."[58] The State of Oregon can be used as a reference point to monitor the progression the CDC is accomplishing their hopeful outcomes. In order to create desired outcomes by the deadline of 2020 the goals ls have been extended to individual states to create their own action plans. Specifically, Oregon has driven the CDC's Get Smart Week with local partnerships through a campaign called AWARE.[59]

Oregon's Get Smart Week 2015 has the same goals as the national idea. During Get Smart About Antibiotics Week, Oregonians are to be reminded to "use antibiotics as prescribed and to remember that antibiotics are not effective in treating viral infections, such as the common cold or flu."[60] This year, they are aiming to reduce rising rates of antibiotic resistance by:

- "Promoting adherence to appropriate prescribing guidelines among providers"[61]
- "Decreasing demand for antibiotics for viral upper respiratory infections among healthy adults and parents of young children"[62]
- "Increasing adherence to prescribed antibiotics for upper respiratory infections"[63]

The Get Smart About Antibiotics campaign has been an ongoing effort since 2003 to reduce the use of antibiotics throughout the U.S. by targeting healthcare providers, then parents, and the public. Their strategy surrounded partnerships with state health initiatives and education. An extension of the "providers" as public, the campaign aimed to tackle a primary source of the human ingestion of antibiotics by educating veterinarians and those involved in caring for

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[55] Ibid; The White House (2015)
[56] Ibid; The White House (2015)
[57] Ibid; The White House (2015)
[58] Ibid; The White House (2015)
[59] Oregon Health Authority (n.d.) Antibiotic Resistance (AWARE). Oregon Public Health. Retrieved February 16, 2016 from http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/index.aspx
[60] Oregon Health Authority (n.d.) AWARE: Get Smart Week. Oregon Health. Retrieved February 26, 2016 from https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/getsmartweek.aspx
[61] Ibid; Oregon Health Authority (n.d.), AWARE: Get Smart Week
[62] Ibid; Oregon Health Authority (n.d.), AWARE: Get Smart Week
[63] Ibid; Oregon Health Authority (n.d.), AWARE: Get Smart Week

animals that will later be used as food. To educated parents and the public, the campaign relied heavily on traditional media sources; such as pamphlets and posters in the primary care office. The campaign successfully accomplished an increased acceptance of the need to reduce the use of antibiotics by National Legislation as a National Action Plan was put into place in defense of antibiotic resistant diseases, which supported the campaign. While many people are aware, the campaign has lacked action from general public and still parents to request alternative options from their provider other than antibiotics.

The AWARE campaign, or "Oregon Alliance Working for Antibiotic Resistance Education," is committed to heading initiatives that aim to reduce the problem of antibiotic-resistant bacteria in Oregon.[64] The only materials listed on their site are flyers, posters and a single presentation; all of which were decidedly lackluster.[65] Their website has a section for healthcare professionals, educators, and child care.[66] From this, we can infer that their key publics are healthcare professionals, teachers, and parents. Our research yielded no information on plans to distribute them, nor any information about any major implementation programs. We have concluded that the AWARE campaign was not well publicized or properly implemented, failing to significantly impact their key publics.

The campaign held a successful conference of medical professionals to teach them about the harmful effects as well as the proper use of antibiotics, along with knowledge about alternative medicines that could as effectively or better treat diseases and symptoms previously used by antibiotics. Partnering with medical professionals individually as well as entire health care facilities was a strength in the campaign as it helped create a support system for doctors to feel more comfortable prescribing other drugs for what they previously would have used antibiotics to treat. Although these things they did were positive, the campaign lacked the ability to measure commitment and follow through by medical professionals surrounding the goals of their campaign. The lack of action and commitment to the cause by their partners, ultimately devastated the campaign's goals.

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[64] Oregon Health Authority (n.d.) AWARE Materials. Oregon Public Health. Retrieved March 4, 2016 from https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/GetAwarePublications.aspx

[65] Ibid; Oregon Health Authority (n.d.) AWARE Materials.

[66] Ibid; Oregon Health Authority (n.d.) AWARE Materials.

S

1. Issue is relevant and timely
2. Copious amount of funding
3. CDC is well known
4. Access to scientific resources
5. CDC has a large reach

W

1. Topic is unknown to most publics
2. Dissipated quickly
3. Over saturation of information
4. Campaign instilled fear

O

1. Reduce antibiotic resistance
2. Community engagement
3. Educate the public
4. Promote alternatives
5. Educates the public

T

1. Pharmacies pushing antibiotics
2. Uninformed publics
3. Time Sensitive campaign
4. Government funded organization can be misinterpreted as a political agenda
5. People aren't interested

Strengths:

1. The issue is relevant to today's publics and currently affecting the public. Antibiotic resistance is a timely issue because it has become a bigger problem in recent years and worsens over time.
2. The CDC has a large amount of funding available to them because they are a government organization.
3. The CDC is a national organization known throughout the country for their involvement and expertise in all diseases and disease prevention.
4. The CDC has access to many scientific and resources across the country.
5. The CDC is an enormous government agency with a wide range of resources; for research, funding, and a personal network of supporters to help the campaign.

Weaknesses:

1. The campaign did not seem to be well known, when googled AWARE is not the first thing that comes up in a search engine. Also when local medical professionals were asked about the campaign many had not heard of it. The campaign lacked the reach it needed in order to make an impact.
2. The campaign lost steam. It appears to have experienced little interaction after only a few months, rendering it more or less irrelevant.
3. There is a copious amount of information distributed by CDC daily to reach a target audience that is already bombarded with information.
4. The campaign seems to use some tactics that could come across as trying to scare parents into not using antibiotics. Fear tactics tend to not be received well when there is not a direct path given for solving the issue.

Opportunities:

1. We can help cut down antibiotic resistance by showing how antibiotics aren't always necessary and they can even be harmful.
2. We can engage the community to help our key publics spread our message about antibiotic resistance.
3. We can help educate the public on antibiotic resistance to bring to their attention reasons they should care about proper antibiotic usage.
4. We can help promote the alternatives to antibiotics. Things such as not using antibiotics, herbal remedies or even just at home treatments may all be effective.
5. We have a chance to educate the public about this issue and help them make an informed decision on proper antibiotic usage.

Threats:

1. Many pharmaceutical companies will push antibiotics for profit. They also pay doctors to push certain medications including antibiotics.
2. The public can be uninformed or misinformed closing them off to the new information that the CDC is publishing; this can cause a block in the way information is received.

3. There are always time constraints on the campaign. A few months of information about resistance may not be sufficient to change actions.
4. Since funding is from the government people may theorize a political agenda behind the campaign.
5. Parents typically have strong opinions about the well-being and treatment of their children. If they feel as though antibiotics are necessary, they will ask for them. It will be difficult to convince a parent that the antibiotics are not necessary when that is what they believe their child needs.

IV. TARGET PUBLICS:

Key Publics 1:

For this key public, we are focusing on mothers of young children. We perceive this mom as active in her community and technologically savvy. Most likely a stay-at-home mom, she is more likely to stay up to date on the newest trends and best information about motherhood. This mother is twenty-three times more likely to buy organic than the last generations of mothers.[67] She also "prefers herbal remedies five times as much as the previous generation."[44] We have chosen to explain this demographic through the persona of "Helen." "Helen" is not only a vocal and active member of her peer group, but within her community. Because of the family's middle to high income level, she is able to live in a suburb as a stay-at-home mother. As a woman who reads her parenting books, she wants to let people know of all the dangers she, or anyone around her, could be putting their child in. "Helen" is likely a leader in local organizations such as the PTA and the Neighborhood Watch, and occasionally participates in rallies to make the world a better place for her children.

Due to her financial stability, this mother has access to quality medical care and is able to take her child to the doctor regularly. She also may know doctors personally within her own peer group. As an opinion leader within the community, she is able to spread her beliefs to other parents. This mom is a trustworthy source and has the social standing to push the difference between awareness and acceptance. The bandwagon effect within her peer group will allow many other local mothers to jump on board. Mothers like "Helen" are a target audience, because ultimately physicians do not have pressure by their patients to deliver alternative prescriptions to antibiotics. Without external pressures and a threat of loss of clientele or patients, there is no motive to change acceptance or influence action. This mom does not think twice about stating her opinion and sticking up for what she believes in and telling her peers or even criticising peers who have differing opinions in many social setting again and again.

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[67] Exponential Advertising Intelligence (n.d.) "Marketing to Millenial Moms"; Retrieved February 29, 2016 from http://exponential.com/advertising/millenialmomswhitepaper/Millenial%20Moms%20Whitepaper.pdf

Key Publics 2:

For this key public, we are focusing on middle to lower-middle class grandmothers. "According to 2010 U.S. Census data, 4.9 million American children are being raised solely by their grandparents. The number is almost double that of the 2000 Census of 2.4 million."[68] According to Sharon Giacchino, program director at Northwest New Jersey Community Action Partnership (NORWESCAP), for any reason at all more than just an unexpected circumstance such as divorce, widow or separation, grandparents step in as caregivers for the grandchildren.[44] This is the grandmother we are targeting. We have chosen to describe this demographic using the person of "Grandma Kathy." "Grandma Kathy" is the all hands on deck grandmother. She is middle to lower-middle class. She often watches her grandchildren while her adult child is at work. She cares about saving money, and often occupies her time at the community center or quilting. "Grandma Kathy" is more prone to be influenced by traditional media such as newspapers.

She is always ready to offer her own opinions and advice to her adult child. Since "Grandma Kathy" helps take care of the children on a daily basis, she is not afraid to voice her opinions to her adult child about the health and well-being of her grandchildren. She has spare time to read traditional media such as the newspaper, or magazines sitting on a doctor's coffee table, and cares about every word in the pamphlets the doctor gives her.

To target "Grandma Kathy" and similar characters, we would continue to put out traditional media, but enhance the budget to enhance the visuals. "Grandma Kathy" is drawn to things that bring her enjoyment for a low to nonexistent cost, but as an opinionated and experienced women, she knows what she likes; in which case the campaign should take a noetic approach to align with a place that she is already familiar with and accepting of. Partnering with community centers could enhance the possibility of "Grandma Kathy" accepting the new information she is given about proper antibiotic use.

V. GOALS, OBJECTIVES, STRATEGIES, AND TACTICS:

Goal: Reduce the use and over-prescription of antibiotics in cases where they are not necessary.

Key Public 1- Parents of Young Children:

Objective 1: Increase awareness about antibiotic resistance by 25 percent among parents of young children as measured by pre- and post-event surveys.

- **Justification:** If there is an increase awareness about the harmfulness of antibiotics and the risks they may have for their family, and especially children, they may be motivated to speak up to the doctors about alternatives methods of medication. The pre- and post-

[68] Makin, Cheryl (July 27, 2014). More grandparents raising grandkids. USA Today. Retrieved February 28, 2016 from http://www.usatoday.com/story/news/nation/2014/07/26/more-grandparents-raising-their-grandkids/13225569/

event surveys will make it easier to track our progress and impact. The surveys will help us create tangible information to better understand the target we are trying to reach.

Strategy 1: Create an audience engagement campaign that involves the target public and facilitates two-way communication by hosting a special traveling park event educating parents and children of the effects of antibiotic resistance.

- **Justification:** We created an action strategy in order to get these parents involved in the issue. If we get parents active at our event and talking about the subject at our pseudo event it will create accountability to ask for alternative medicines other than antibiotics at the doctor's office.

Tactic 1:

- **Information exchange:** Parents who come to the park with their children will be asked if their children want to participate in a bounce house. While the children participate, educated volunteers will inform the parents of antibiotic resistance.
    - **Justification:** The enticement of the bounce house will draw in families, specifically our targeted mother demographic, so that those working at the campaign can create one on one audience engagement.

Tactic 2:

- **Organizational Media:** At the event, distribute flyers and flyers to parents.
    - **Justification:** Bringing flyers and flyers to give to people will give information that while in their hands will feel inclined to read.

Tactic 3:

- **Organizational Media:** Encourage parents to interact with our social channels where we will be promoting future park events and giving more information about antibiotic resistance.
    - **Justification:** Promoting future park events will create an association of action with this campaign's goal of asking for alternative medication while at the doctor.

Tactic 4:

- **Partnership:** Partner with whole foods store who will supply healthy snacks at our event.
    - **Justification:** As the moms in our demographic are twenty-three times more likely to buy organic than the last generations of mothers.[69] Partnering with grocery stores that mom's are already

[69] Ex ponential Advertising Intelligence (n.d.) "Marketing to Millenial Moms"; Retrieved February 29, 2016 from http://exponential.com/advertising/millenialmomswhitepaper/Millenial%20Moms%20Whitepaper.pdf

comfortable with and have deemed acceptable for their kids; this will create a noetic response that the campaign needs to gain acceptance by our mom demographic.

Tactic 5:

- **Uncontrolled Media:** Pitch to local news outlets about the park event in hopes of getting publicity for it and adding credibility to the event.
    - **Justification:** Using uncontrolled media for promotion will help create a two-step flow of information to the public. The two step flow will create an unbiased opinion for the public to listen to and decipher from.

Tactic 6:

- **Uncontrolled Media:** Invite parenting bloggers to the event to cover and write about it.
    - **Justification:** Parenting bloggers gives credibility to the subject of antibiotic resistance. Using popular parenting bloggers will be helpful to reach our correct demographic of other parents that read these blogs.

Tactic 7:

- **Information Exchange:** Distribute healthy snacks (water bottles and granola bars) with the CDC website, social logos and a call to action. Example: "Are you really keeping your child healthy?"
    - **Justification:** The healthy snacks will help show that the campaign cares about their children's health. The positivity the parents will feel from giving the kids the healthy snacks will transfer to the campaign.

Objective 2: Increase acceptance of limiting antibiotic use by seven percent as measured by email surveys among parents of young children by December 2016.

Strategy: Alliance: Create alliances with influential moms. This strategy aims to influence opinion leaders within our target public who will then facilitate two-step flow to other parents of young children.

Tactic 1:

- **Uncontrolled media:** Pitch to popular mommy bloggers about the affects of children over using antibiotics.
    - **Justification:** Because mommy bloggers are often opinion leaders for many in their "social media community," they will facilitate two-step flow with others in our key public. Their word will often be more credible and better accepted than ours because parents of

young children trust these writers and seek them for personalized parenting advice.

Tactic 2:

- **Targeted media publications:** Pitch to parenting magazines in hopes they pick up our story.
    - **Justification:** Our key public is likely to have a subscription to these magazines, or they will be in places where there magazines are present. Examples of this are doctors offices, dentist offices and schools.

Tactic 3:

- **Information Exchange:** Attend popular mommy and me classes to have one-on-one conversations with parents in the community. This will mimic an educational gathering.
    - **Justification:** Moms who attend these classes will often be inforamtion leaders for other moms in their community. Although we will reach less people by using this tactic, they do have a higher chance of getting our chance across to the people who we do talkt to.

Tactic 4:

- **Controlled Media:** Utilize our social media channels to reach key publics.
    - **Justification:** As part of our awareness objectives, we have to properly inform our publics about the benefits as well as the harms of antibiotic usage. The best way to let our agenda be known is to give the public abundant information, as technology and medicine has advanced we now know about antibiotic resistance while in years past it was known that antibiotics did not have the side effects and potential to resistance that we now know.

Key Public 2 - Grandparents Objective:

Objective 1: Increase awareness about overuse of antibiotics among grandparents by 25 percent as measured by mail surveys conducted pre and post campaign period.

Strategy 1: Newsworthy Information: Present newsworthy information, in the form of pitching, to traditional news sources in hopes that they will pick up our story.

- **Justification:**

Tactic 1:

- **Uncontrolled Media:** Pitch to local news outlets.

- **Justification:** When a news outlet picks up our story, credibility is added to our campaign. News sources is also where our target demographic gets most of their information.

Tactic 2:

- **Targeted Media Publications:** Pitch to popular traditional media publications that reach an older generation.
  - **Justification:** Using mediums that are noetic to an older generation's current interest will help reach our key public of grandparents. "Gen-Xers, aged 35-65, have a more traditional stance and have been able to see the true impact of traditional media over the years, including radio, television and print advertising."[70]

Strategy 2: Alliance: Create small alliances with community centers to distribute our information.

- **Justification:** Creating an alliance with smaller centers in the community will help give a sense of sincerity that the CDC as a larger organization may not have. The more approachable and seemingly trustworthy source, will help create acceptance of the information the AWARE campaign is spreading.

Tactic 1:

- **Organizational media:** Posters and flyers will be sent to community centers. These centers can hang them in places where our key publics will see them.
  - **Justification:** Community centers are a location where people who are more open to new experiences and meeting new people might conglomerate, with the openness to new things they will be looking to keep learning and have new experiences which are often publicized through similar mediums.

Tactic 2:

- **Direct Mail:** Utilize community center's contacts by either sending our own emails to their customers or joining existing email campaigns by adding our own information.
  - **Justification:** Our elderly target public use traditional mail for exchanging information. "61 percent of adults 65 years old and older, still do not go online."[71]

Tactic 3:

- **Digital Media:** Information will be published on various community center's website and social media sites. Asking community centers to put our information

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[70] Sisenwein, Sara. (May 18, 2015). Battle of the Ages: The Digital v. Tradional Media Debate. Media Post. Retrieved March 7, 2016 from http://www.mediapost.com/publications/article/250194/battle-of-the-ages-the-digital-vstraditional-med.html?edition=

[71] Smith, Aaron (April 3, 2014). Older Adults and Technology Use. Pew Research Center. Retrieved March 7, 2016 from http://www.pewinternet.org/2014/04/03/older-adults-and-technology-use/

on their website in the form of either a link on their homepage that will direct them to our website, or in the form of our own tab with detailed information.

- **Justification:** People coming to the website to get information about other programs will be drawn to our information. This is also a free medium which allows us to allocate our budget to more projects.

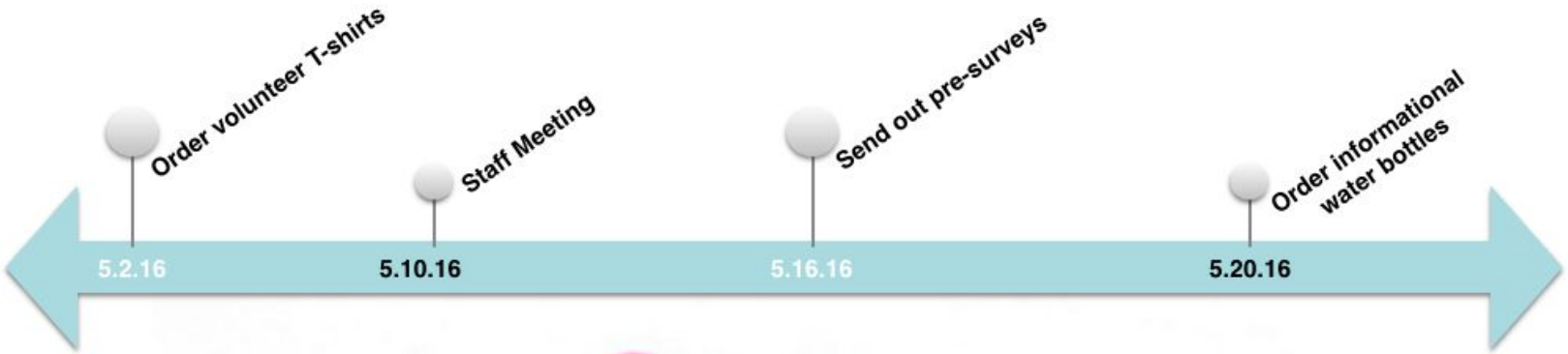
VII. IMPLEMENTATION TIMELINE:

This campaign used the pulsing approach for the first three months, combing continuity and flighting this campaign has constant communication with the public with specific bursts of intensified communication on key campaign dates. The use of bursting on the event dates are used to draw in the targeted publics in the city that the event was held in. During the last three months of this campaign, the continuity approach was used, keeping a consistent level of messaging through these months. Pulsing is the most appropriate approach for the first three months because we plan on holding events that can be live tweeted and interacting with the public through social media posts. The events will only be held in the summer months because of Oregon's weather limitations. For the last three months of the campaign we will continue to post weekly on all of the social media platforms, but without events to focus our bursting around we feel as if it no longer needs to be part of our campaign. The last few months will focus on sending information out continuously and maintaining a constant message.

May 2016

Prior to the Campaign

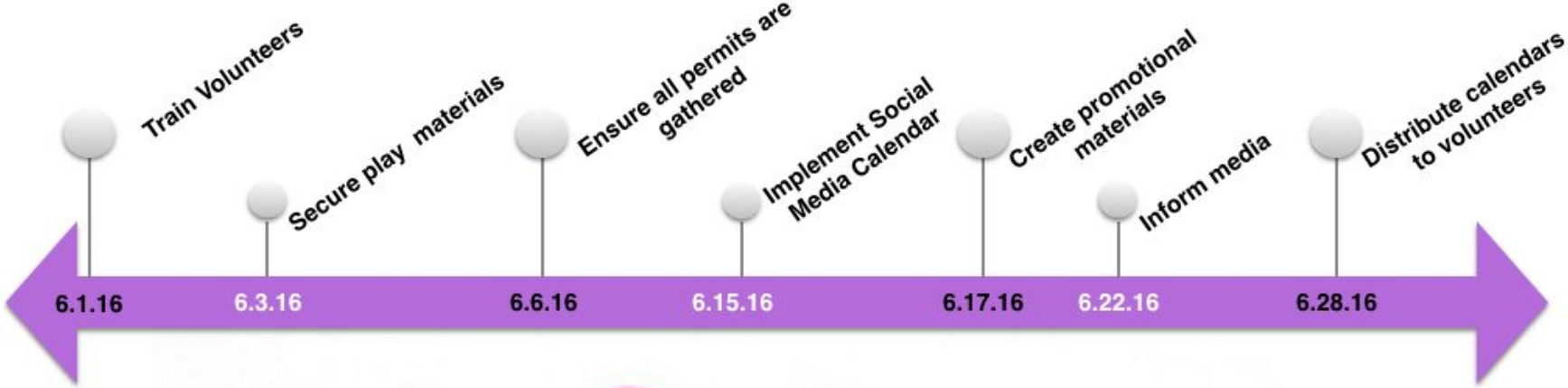
Preparatory Month



June 2016

Prior to the Campaign

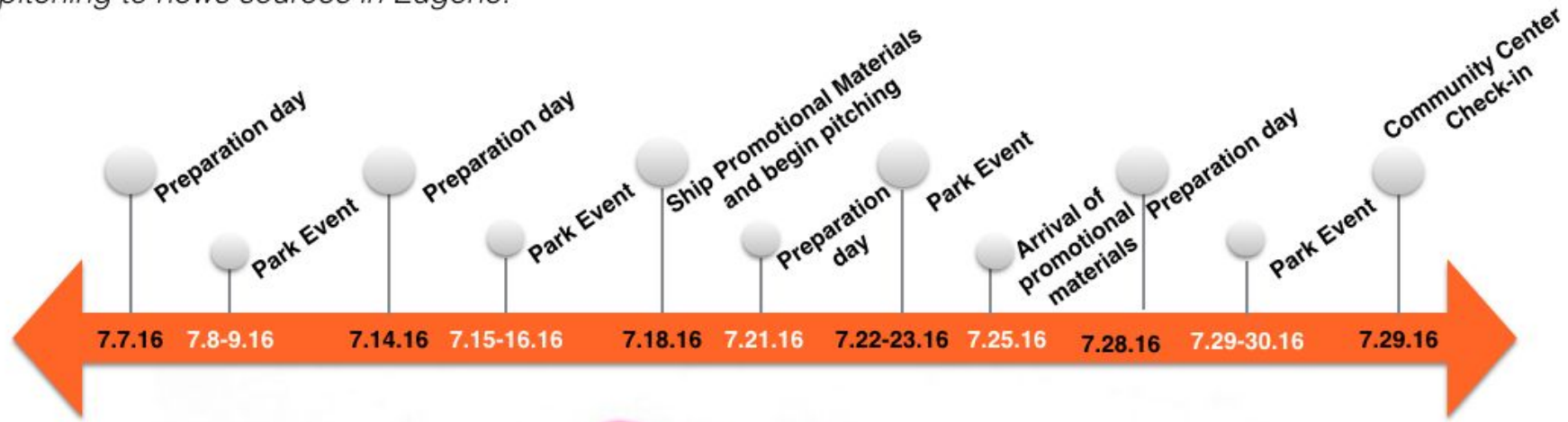
Preparatory Month



July 2016

1st Month of Campaign

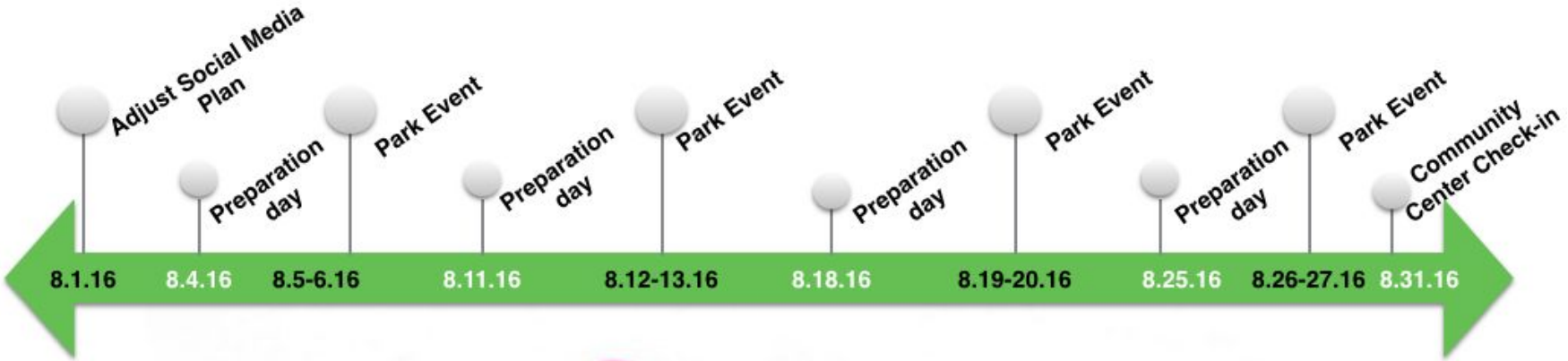
This month is an example of "flighting." The first two events take place in Portland, in the last two weeks begin pitching to news sources in Eugene.



August 2016

2nd Month of Campaign

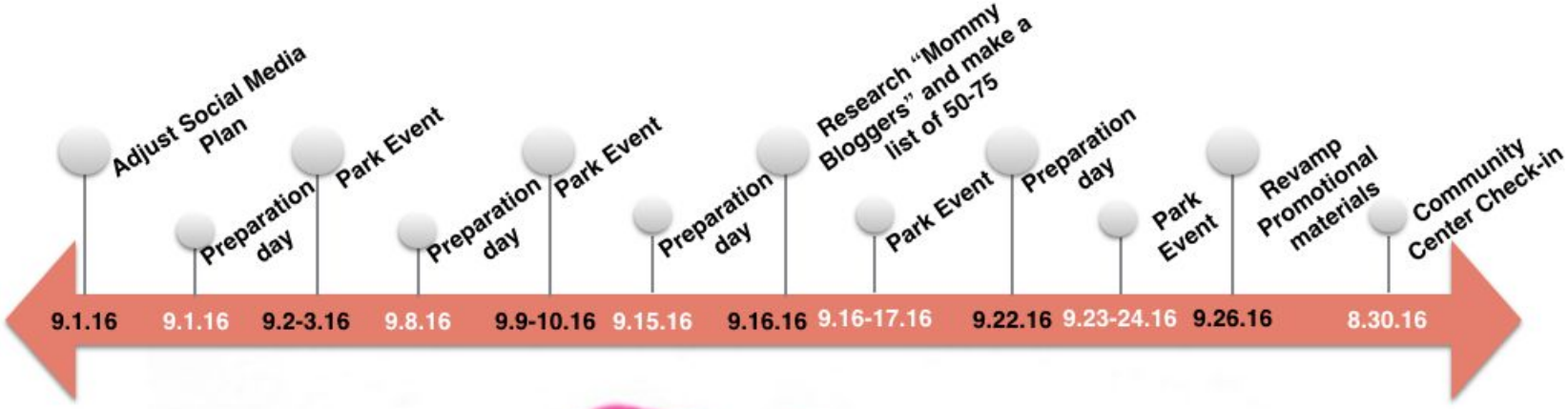
The Park events will take place in Eugene. Promotional materials are shipped to community centers. Last two weeks, begin pitching to news media in Bend.



September 2016

3rd Month of Campaign

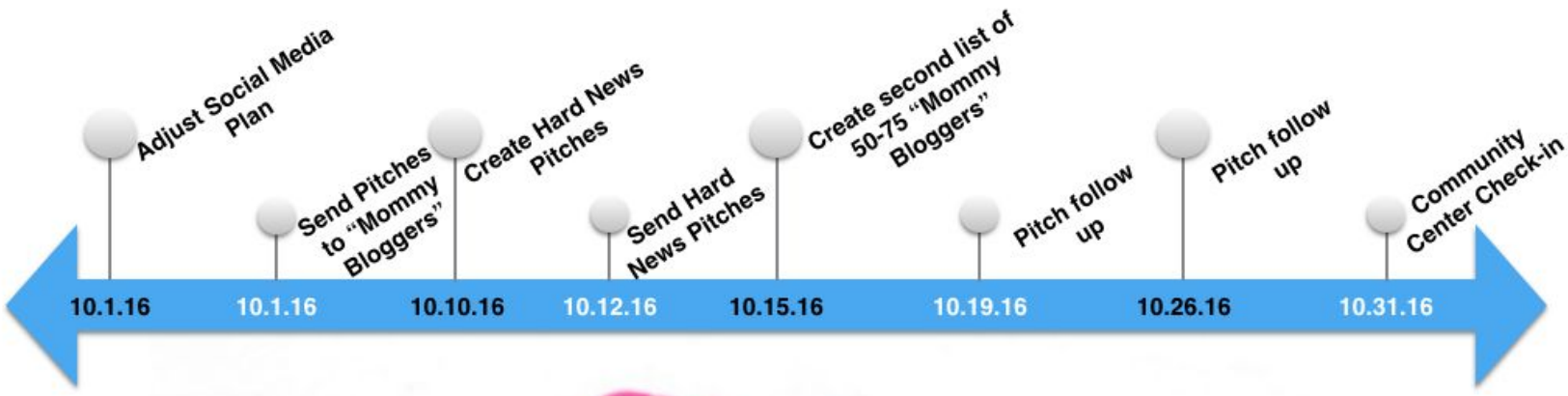
The park events will take place in Bend.



October 2016

4th Month of Campaign

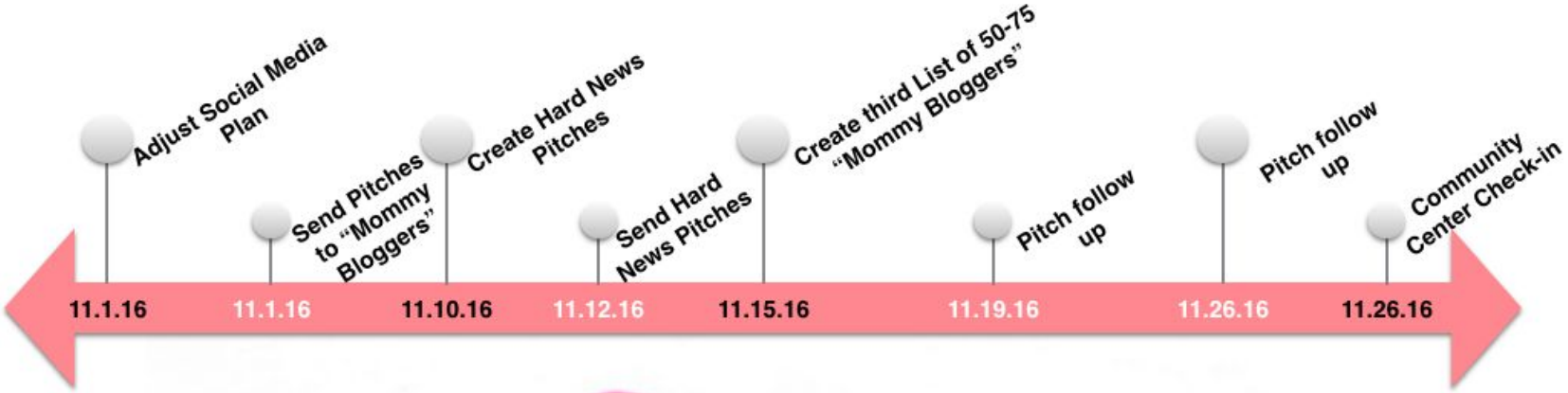
Hard news coverage and ship promotional material. Bi-weekly call to community centers.



November 2016

5th Month of Campaign

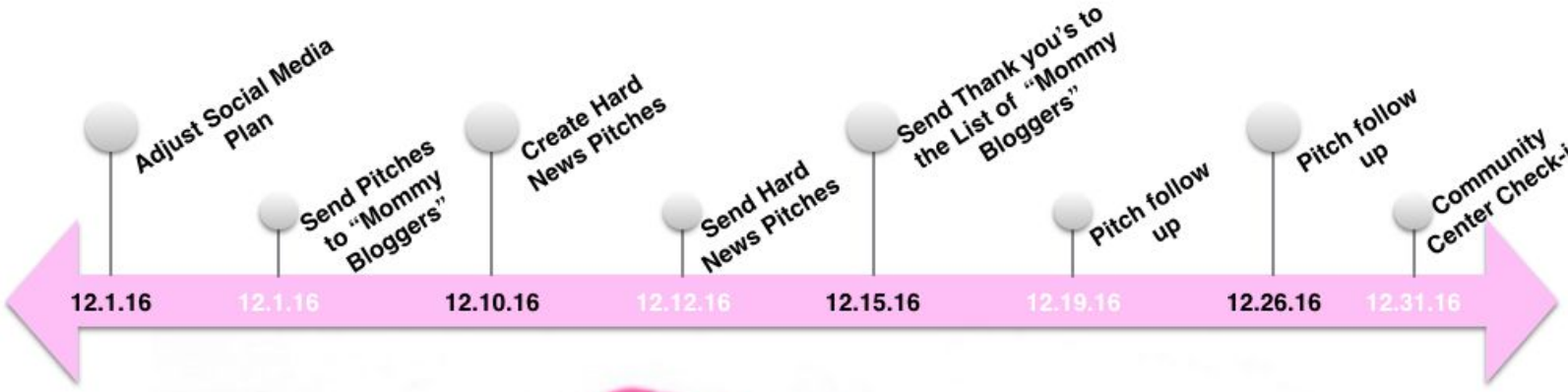
Hard news coverage and ship promotional material. Bi-weekly call to community centers.



December 2016

6th Month of Campaign

Hard news coverage and ship promotional material. Bi-weekly call to community centers.



VIII. IMPLEMENTATION BUDGET:

Location	Product	Price	Quantity	Total
Park Event				
Portland	Park	$550	8 days	$4,400
Eugene	Park	$195	8 days	$1,560
Bend	Park	$165	8 days	$1,320
All	Bounce house	$256.63	4	$1,026.52
All	Volunteer T-shirts	$6.05	150	$907.50
All	Stickers for donated water bottles	$51.10 @ 3,000	3	$153.30
All	Stickers for donated granola bars	$15.91 @600	11	$242
All	Flyers	20,000 @ 1,029.73	1	1029.73
Community Center Materials				
Portland	Posters	$6.74	90	$606.60
Eugene	Posters	$6.74	30	$202.20
Bend	Posters	$6.74	12	$80.88
Grandparent Outreach				
All	Direct mailers	$0.03	302,326	$7,955.32
All	Direct mailers round 2	$.03	151,163	$4,534.89
All	Visa gift cards	$100	9	$900
All	Misc.			$80.79
Total Revenue				$25,000

Bend Park and Recreation District
700 SW Columbia Street, Bend, OR 97702
(541) 389-7275
http://www.bendparksandrec.org

Lane County Parks
3050 N Delta HWY, Eugene, OR 97408
(541) 682-2000
http://www.reservations.lanecounty.org

The City Of Portland Oregon
1120 SW Fifth Ave, Suite 1302, Portland, OR 97204
(503) 823-6007
http://www.portlandoregon.gov

Walmart
850 Cherry Ave, San Bruno, CA 94066
1 (800) 925- 6278
http://www.walmart.com

Custom Ink
2910 District Ave., Fairfax, VA 22031
1 (800) 293-4232
http://www.customink.com

Avery
1 (800) 462-8379
http://www.avery.com

Vista Print
95 Hayden Ave. Lexington, MA 02421-7942
1 (866) 614-8002
http://www.vistaprint.com

IX. EVALUATION PLAN:

Objective 1: Increase awareness about antibiotic resistance by 25 percent among parents of young children as measured by pre- and post-event surveys.

- Including post surveys will help our campaign learn how we are most effective that is aimed at our key public.
- Pre- survey's will have questions surrounding their current health care methods, and previous concerns about the medicines they have been provided by their primary care physician.
    - ex: "How often do you or your child use antibiotics?"
    - ex: "Do you know that you can become aware of antibiotic resistance?"
    - ex: "Do you prefer antibiotics to other methods of medication?"
    - ex: "Does your primary care physician ask you your prefered method of treatment for non life threatening diseases?"
- Post surveys will be themed around how they feel about antibiotics after the information they received about antibiotic resistance. It will also ask if they would be comfortable asking their primary care physician about using alternative prescriptions to antibiotics for them or their children in a time of need.
    - ex: "Do you know of the harms of antibiotic resistance?"
    - ex: "Do you now feel comfortable asking your primary care physician about alternative treatment methods to antibiotics?"
- Comparing the answers before and after each survey will give us the rate in which parents changed their behavior regarding antibiotics.

Objective 2: Increase acceptance of decreasing antibiotic use by seven percent as measured by email surveys among parents of young children by December 2016.

- We would know this objective was effective by the emailed surveys showing a seven percent or more increase in parents accepting.
- Through email survey's you can track how many people open your email.
- Through email you can track clicks to access the website.
- By tracking these emails we can find out who we are reaching, who is most interested and engaged in the topic, and track the effectiveness of each strategy in the campaign.

Objective 3: Increase awareness about overuse of antibiotics among grandparents by 25 percent as measured by mail surveys conducted pre and post campaign period.

- In mid May, first round mail surveys will be sent to older generations. With the information from the Current Population Demographics and Statistics for Oregon by age, gender and race, we know that there are over 300,000 Oregon residents

who are ages 62 to 74. We will send a pre campaign survey to all of those residents. Because mail surveys have about a 50[72] percent response rate, over 150,000 residents will then receive a post survey after the campaign to measure our results. Those who respond to the survey will be entered into a drawing to win a $100 Visa gift card. Incentive techniques will hopefully encourage a higher response rate.

- By just reaching the grandparent target public the campaign through mailers, this target public will have something tangible to read and become engaged with.
- Grandparents who receive direct mailers are not as engaged with as many messages as someone who spends their day online and soaked in electronic media. The physical mailers could be most effective in making an acceptance change among this grandparent target public.

X. LIMITATIONS:

Limitations to this plan is that our first target public, mothers age 25-35, are already a highly sought after demographic for multiple agendas. Our second key public is also limiting as they have already been parents, so they are less likely to accept new information about childcare. Part of our organizational performance strategy is an event at a park; in which case the number of audience members we are able to reach relies precariously on attendance. Events tend to be time-consuming and expensive, as well as require participation from target audience; a factor than cannot be controlled. The confined budget doesn't allow us to target the entire state only a limited amount of metropolitan cities.

Additionally, pediatric care is a sensitive topic, as we hold alternative beliefs to current culture norms about the health and safety of children. It is also an intense subject because the wrong information could have long-term negative effects on a child's development. Therefore, targeting audiences that care for children will be difficult to motivate to action if they already have set beliefs that antibiotics are necessary. Finally, the topic is not particularly enticing, there is no immediate incentive to motivate an audience. They have to trust the CDC that it is worth their time and effort to take preventative actions.

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