

Master of Professional Communication (MPC)

Major Research Paper

Framing Crisis:

News Media Narratives of the “Opi-void” (Opioid)

Epidemic on Twitter

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i. Abstract

The following Major Research Paper (MRP) focuses on the discussion of opioids in Canada, online news outlets, and social media. More specifically, this research focuses on the Canadian Broadcasting Corporation (CBC), and how the organization frames the opioid crisis on Twitter through @CBCNews. This research excludes other CBC Twitter accounts (i.e., @CBC, @CBCAlerts, @CBCOttawa, @CBCToronto, @CBCManitoba, @CBCPolitics, @CBCCanada), as @CBCNews is the most active with 2.62 million followers.

The following discussion considers the opioid discussion from a crisis communication lens. This research asserts that there is an apparent opioid crisis, given the situation's complexity, and number of opioid-related deaths. This research questions how social media (specifically Twitter) act as a tool for information dissemination during a health-related crisis, and how external factors (i.e., public opinion, bias, and current affairs) shape news content online. Without understanding the narrative (i.e., how a story is intentionally told) and strategies behind social media posts, news outlets like the CBC can promote hidden agendas and ideals (without a large amount of public knowledge or opposition). The CBC has goals, commitments, and preconceived notions like any other private organization.

This reality is incredibly problematic during a public health crisis, as human lives depend on appropriate and trustworthy information. Instead of discussing an issue without bias or pre-conception, news outlets may provide subjective, false or vague information, which could lead to negative repercussions (Kim & Hyojung, 2017). Due to private motivations, the intent to control the opioid conversation (through politically-driven content, stigma-driven content or to even place blame, for example) or the

promotion of ideas beneficial to pharmaceutical companies, for example, do news sources frame Twitter posts with a specific narrative in mind?

Instead of analyzing social media as an enabler or an initiator of framing crisis online, this research focuses on how news outlets frame crises through social media as one of many possible media channels. Examining how social media as a platform acts as an echo chamber (therefore enabling an intended narrative) is an interesting concept. However, this type of analysis is beyond the scope of this research. As a result, the following Major Research Paper explores the following primary research questions:

1. How does the CBC frame the issue of opioid usage in Canada? In addition, why are their Twitter posts framed a certain way?
2. What is the nature of the dialogue occurring in response to the CBC's Twitter coverage? What strategies are most conducive to audience response?
3. How are fluctuations and outliers in news coverage accounted for by the CBC? Do socially and/or politically driven events impact the timing of posts?

Keywords: social media, crisis, communication, opioid crisis, strategy, political, narrative, framing, Canada, fentanyl, naloxone.

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v. Introduction

Social media are changing the contemporary media landscape. Once created to unite friends, these tools of mass connection now influence our social lives and how we communicate. From the interpersonal, mass-mediated, educational, organizational to the political (Sheldon, 2015), almost all facets of life involve social media communication. Therefore, many individuals rely on social media as their primary source of information gathering (Shearer & Gottfried, 2017). Because most news outlets exist online, specifically with active social media channels, individuals that maintain their knowledge of current affairs can go online and consume information immediately.

As a result, social media are not only used as a tool for one-way communication (i.e., without interacting with the intended audience) but also act as a conversation starter between multiple parties. With the ability to comment, like, and share any single post (whether from a news outlet or an average individual), the amount of available information online is infinite. When information exists on such a large scale from a variety of different authors, the authenticity of the information requires questioning. A primary struggle exists when obtaining news from social media: are news sources framing articles with a specific narrative or external motivation in mind?

According to Knobloch-Westerwick (2017), a wide variety of messages from within a specific post, news article or television show (for example) convey biased information. Furthermore, while media outlets appeal first and foremost to “entertainment needs” (i.e., topics that are easily readable), amusement, and emotional involvement, ulterior motivations are always present (Knobloch-Westerwick, 2017). In other words, the prevalence of personal or organizational motivations are existent regardless of the medium used to communicate. Because most media disseminate content (whether

satirically or seriously), there is no established structure to evaluate or gauge the bias of a post. Unless one is incredibly informed or educated on the topic in question, readers may find it difficult to discern the severity or impact of content. In the current social media consumption age, politically-driven posts are especially problematic; readers may not understand the intention of a specifically framed post. Concerning news media, readers may not understand whether a narrative exists at all. Instead, social media users may take the information at face value without questioning the origin of the content, why the content was published at the current time, the post's intended audience, and whom the post may (or may not) directly or indirectly effect.

Alongside political biases, news and media outlets also portray both evident and subliminal personal and ethical biases. Although these narratives can turn into a political discussion, they are not directly political in nature. For example, when looking at drug addiction, personal narratives are increasingly common in popular culture. According to Pienaar and Dilkes-Frayne (2017), "stories most prevalent in the media often rely on stereotypes and offer few clues about the variety of experiences people have and the many ways they cope and live rich, meaningful lives" (Pienaar & Dilkes-Frayne, 2017). Instead of discussing topics with empirical, fact-based information, the popular conversation revolves around opinion.

With drug addiction, popular narratives can quite easily focus on underprivileged, disenfranchised, and neglected populations. By no means should the conversation neglect this narrative; however, an individual's preconceived notion of an addict may neglect drug users who are financially stable or are within a non-marginalized population. When opinion plays a more significant role in the dissemination and framing of information (as opposed to unbiased and fact-based information), the root of the

problem will never warrant appropriate discussion. In an age where the average individual with a Twitter account can promote their opinion at a moment's notice (no matter how radical or incorrect), this reality is increasingly problematic for serious issues online. The power to promote information (whether correct, incorrect, politically charged, or personally biased) is increasingly difficult to challenge and track.

Fortunately, readers of news media are increasingly skeptical about the validity and stance of many news outlets. With the rise of Donald Trump and the “fake news” phenomenon, consumers of news media understand that news outlets publish biased content (McNair, 2017). Whether the “fake news” phenomenon holds merit, readers should promote a healthy skepticism of politically and socially driven content.

Regardless of political standing, a news source could theoretically publish content geared towards one end of the political spectrum (i.e., left versus right). Therefore, the reader becomes responsible for determining the validity of the content and its bias. At the most fundamental level, the ability to challenge news media and to communicate opinions that may challenge the status quo is built into Canadian democracy. By understanding the underlying narratives promoted by all content publishers, the largest underlying problems may spark appropriate discussion.

Finding unbiased, accurate and timely information is not always realistic. This reality is true during a healthcare-related crisis, more notably, the opioid crisis. According to Entman (2007), framing works to shape and alter audience members' interpretations. In other words, narratives can introduce the idea that certain opinions garner increased attention. This strategy encourages the targeted audience to think and feel a certain way about an issue (Entman, 2007). During a healthcare crisis, we may

not look for a narrative (or understand a specific hidden message). Instead, because of the severity of the issue, we may believe the information that is most available.

The opioid crisis is unlike most health crises. While it does resemble other health crises (i.e., an airborne disease or chronic illness), the opioid crisis is unique in that it often involves the over-prescription of medication by doctors, economic and social upheaval, psychological trauma, disadvantage, and loneliness (Dasgupta, Beletsky & Ciccarone, 2018). Nevertheless, 4,000 Canadians died from an opioid-related overdose in 2017 (Canadian Institute for Health Information, 2018). As a result, there is a gap in research that analyses how news outlets frame the opioid crisis. Furthermore, because social media is an integrated part of our society, research must exist that examines the interplay of both crisis narratives and social media strategy.

The way news outlets shape and create narratives can impact the lives of many. During health-related crises, which often illicit a high level of concern, news outlets must be concise, accurate and unbiased. According to Zelizer (2015), “crisis always requires a response” and “letting it run its course does not work” (Zelizer, 2015, p. 893). If crises always warrant a response, what response is most appropriate and beneficial to the public? Until we understand how news outlets use specific narratives to alter public perception, they will hold the upper hand on the discussion. The following research attempts to answer these questions by illuminating the specific narrative strategies used by the CBC’s Twitter account (@CBCNews). The CBC, a public broadcaster and crown corporation, is a unique case as it has different targets, stakeholders, and funding models than other news outlets in Canada. Furthermore, due to its lasting historical connection with Canada (as the oldest existing broadcasting network), the CBC is uniquely positioned as a major source of news in the country. With these factors in

mind, this research examines the response to specific posts that discuss opioid usage, and whether fluctuations in news coverage are a response to external factors (i.e., political campaigns or the opening of a safe injection site).

vi. *Background & History of the Opioid Crisis*

The opioid crisis is not a new phenomenon. As early as 1999, opioids were a leading cause of drug overdose deaths. According to Vadivelu, Kai, Kodumudi, Sramcik, and Kaye (2018), the amount of opioid-related overdose deaths increased 3-fold in the United States (Vadivelu, Kai, Kodumudi, Sramcik & Kaye, 2018). In Ontario alone, treatment for opioid addictions increased from 6,000 patients in the year 2000 to 40,000 patients in the year 2016 (Morin, Eibl, Franklyn & Marsh, 2017). The number of physical casualties that exist as a direct result of opioid addiction and overdose are alarming.

According to Sandilands and Bateman (2016, p. 187), opioids cause a “well-recognized toxidrome including respiratory depression, decreased conscious level, constricted pupils and hypotension.” In other words, pupils will appear small, muscles are very weak, consciousness is minimal (often coming in and out of consciousness), and blood circulation will decrease exponentially. In many cases, these signs of an opioid overdose result in death (Sandilands & Bateman, 2016). In addition to the common causes and symptoms, individuals who abuse opioids will become more susceptible over time. Users may “seek higher doses to achieve the same desired effect” if they were using opioids for the first time (Sandilands & Bateman, 2016, p. 187).

The opioid crisis is unlike any other contemporary drug-related “crisis.” Of course, methamphetamines (i.e., crystal meth) and cocaine (i.e., crack cocaine) can result in mortality. Furthermore, the “war on drugs” is ever present, with constant coverage of illegal smuggling of drugs like marijuana and cocaine. However, it appears that the

number of casualties is a massive contrast to that of the opioid crisis. In addition, the nature of the crisis is entirely different. For example, opioids are entirely legal, prescribed by doctors, and mass-produced by pharmaceutical companies for profit.

There are a variety of approaches to manage the opioid crisis. For example, Desapriya and Ratnaweera (2017) suggest advertisements for prescription narcotics should not exist in medical journals, media campaigns must highlight unclear or underdeveloped research surrounding opioids, physicians should have an increased and improved online presence, physicians should promote alternative pain management techniques, and the current health system must respond to the ever-changing opioid crisis (Desapriya & Ratnaweera, 2017). However, from a news media perspective, how do organizations cover the crisis adequately while staying true to the suggestions of healthcare professionals? Like many crises, the opioid crisis is not “black and white.”

Unlike a natural disaster, the media cannot paint a picture of the cause and solution. There are a variety of reasons why the opioid crisis exists (i.e., racial bias, mental health stigma, over prescription, and the purchasing power of large pharmaceutical companies, to name a few). Instead, the media must be as objective as possible without placing blame. As a result, this research analyses the CBC’s attempt in communication this crisis with every underlying problem, preconception, external pressure, and systemic issue working against the conversation.

vii. Literature Review

A comprehensive and critical literature review is described in the following section. The study of news framing and narrative usage involves three areas of focus: crisis communication strategy and effectiveness (i.e., the usefulness and success of a specific strategy, and the ability to adhere to specific strategies in a crisis situation), crisis

communication applications and learnings (i.e., specific examples that demonstrate crisis communication success or failure, and how these examples apply to the opioid crisis), and lastly, crisis and healthcare communication theory (i.e., theoretical approaches to communication that are unique to healthcare crises).

a. Crisis Communication Strategy & Effectiveness

Social media are not the “principal tools” for crisis communication (Roshan, Warren, & Carr, 2016). Instead, social media are a piece of the proverbial puzzle that encompasses a crisis communication strategy. To elaborate (in addition to the use of social media), news outlets must also consider how they communicate with their stakeholders and audience. Communicating their brand and other mediums through print media or television advertising, for example, are of equal importance under normal circumstances (depending on a predetermined communication strategy). However, only the news outlet will determine which communication strategy works best for their selected goals (i.e., engagement, viewership, new media avenues, etc.).

Considering each available avenue for communication in news media, social media may not be a priority. Furthermore, most of the research surrounding the influence, usage, and relevance of social media during a crisis is still in its infancy (Lin, Spence, Sellnow, & Lachlan, 2016). To theorize the appropriate method of communication during a crisis, Lin, et al., (2016) outline the dominant strategies for use. Through these strategies, the following research can isolate social media as a primary tool for crisis communication (instead of a piece to a broader strategy).

For Lin, et al. (2016), social media strategy involves seven best practices. These practices include the integration of social media in decision making, the active engagement in online dialogue, the inclusion of credible information, the careful and

timely response, the creation of relevant hashtags, the cooperation with similar organizations, and lastly, the monitor of misinformation. Lin, et al.'s (2016) research aids the following research in three primary ways. First, when looking at the CBC's use of Twitter during the opioid crisis, these best practices work as a framing tool for how the outlet handles the crisis. Second, these best practices work as an analytical tool when examining vanity metrics (i.e., likes, retweets, etc.). For example, if a tweet follows the strategies proposed by Lin et al. (2016), did the tweet perform better or worse (in terms of more or fewer likes and retweets)? Lastly, the authors' research can examine whether the CBC utilized specific best practices over time. As the crisis progresses, intensifies or declines, the following research must address changes in strategy. It is important to understand that different users of social media (i.e., news outlets, public relation firms, organizations, and individuals) have different goals altogether. However, by applying these best practices, the research can create an average understanding relevant to all different areas of communication.

To apply the best practices explained by Lin et al. (2016), this research must address the decisions leading to a strategy. Hadi and Fleshler's (2016) discussion of organizational integration of social media is an essential lens of analysis when looking at a specific social media strategy. The authors discuss the importance of social media integration at the organizational level, which is to say social media improves situational awareness, to assess the success or failure of messaging, and to negate any notion of misinformation (Hadi & Fleshler, 2016). Using the authors' research, this current analysis can assess the CBC's awareness during the opioid crisis, the success or failure of their messaging, and how the CBC handles conversation online (to mitigate rumors, misinformation or reputation). This research will not attempt to assert an opinion on

whether the CBC attempts to hide, mislead or hinder the public through their coverage of the opioid crisis on social media. Instead, through this lens of analysis, the research examines whether the CBC provides enough details for updated stories, and to determine whether the organization is competent in its communications (Koerber, 2017).

So far, the research will examine the CBC's social media strategy and their ability to communicate the opioid crisis as an organization. However, to understand their Twitter posts and crisis response, the research must also conduct a narrative analysis. During many crisis situations, it is natural for the public to respond to the assumed voice or political leaning of a news source. As previously discussed, different motivations are omnipresent (Knobloch-Westerwick, 2017), this inevitably produces a narrative of a crisis. However, it is unclear whether the user understands the narrative. Also, it is unclear how the chosen narrative alters the effectiveness and reach of a specific post.

The phrasing of a social media post may seem improvised. However, depending on the strategy of the individual, group or organization under analysis, the construction of narrative is deliberate. Because of the multi-factor nature of a crisis, strategists can structure a post through multiple means like sympathy, apology or information (DiStaso, Vafeiadi, & Amaral, 2015). A response may require a specific narrative due to the unique nature of the crisis. However, to promote a narrative, the party in question may use a specific narrative to manipulate public opinion, sentiment or understanding. For example, communicators such as "influential bloggers and tweeters could be used to communicate to audiences during a crisis" (George & Pratt, 2014, p. 37). By using these communicators, an organization may seem more relatable or open to communications (instead of a press release or corporate spokesperson, for example), as influencers by nature are intended to relate to their social audience (Luvaas, 2017). As a result, the

audience can perceive the narrative of the organizations communication differently. By applying the strategies explained by DiStaso, Vafeiadi, and Amaral (2015), the research can examine the decision to choose a specific narrative. Furthermore, the research can examine and analyze the content (i.e., text and image) of the post. By analyzing the text and imagery of the post to determine the narrative, this research can do the following:

- Examine how the post relates to the perceived strategy of the CBC.
- Ascertain which narratives are most popular (through vanity metric analysis).
- Determine whether specific narratives were chosen due to ulterior motivations (i.e., political or social reasons).

b. Crisis Communication Application & Learnings

By examining historical approaches to illicit drug crises and non-illicit drug crises (i.e., infectious diseases for example), this paper can compare communication strategies from past events to the current opioid crisis. Furthermore, this research can explore why certain crises warrant specific framing strategies by news outlets as a result of historical examples. For example, during the Ebola epidemic of 2014, news outlets utilized an “outbreak” narrative, which defined the problem in terms of a “primitive way of life” and “pandemic culture” (Gerlach, 2016). However, when news outlets cover illicit drug usage (i.e., heroin, cocaine, marijuana, etc.), stories are often “hyped” and provoke moral panics (Swalve & DeFoster, 2016).

By examining past examples of crisis communication, especially from a narrative perspective, we can see that crises are not as simple as the issue itself. Many crises have hidden problems that extend from the original issue. Again, using the Ebola epidemic as an example, the original crisis is the outbreak, which can lead to death.

However, hidden racial, systemic, and socioeconomic preconceptions make the crisis exponentially more complex. By analyzing these different historical examples, the framing behind different types of crises becomes clearer and can illuminate how the CBC discusses the opioid crisis on Twitter.

Vos and Buckner (2016), for example, use crisis and risk communication lenses to evaluate discussion, response, and narrative on Twitter during the avian influenza outbreak during April of 2013. The authors of this research determined that individuals are not entirely aware of their role in the crisis itself. The public active on social media do not understand adequate control or preventative measures necessary during a health crisis (Vos & Buckner, 2016). According to the authors, the public must demonstrate a certain amount of “sensemaking.” However, for the public make sense of the situation, a tweet must contain enough information to enable a deeper understanding of the issue. Appropriate application of crisis communication would include the “number of those affected, the number of deaths, the spread of the crisis (i.e., disease or addiction), vaccine development, and the likelihood of transmission” (Vos & Buckner, 2016, p. 303).

If there is a misunderstanding in this research (which may lead to a lack of sensemaking), primary communicators (i.e., the CBC) must adequately compose informational messages through social media, but also interact with important stakeholders in the healthcare community to allow for appropriate information dissemination. If individuals are not equipped with the relevant information, much like the case of the influenza outbreak of 2013, how effective are the communication strategies in place? For example, Vos and Buckner (2016) found, “tweets placed the event in a framework by dismissing it as media frenzy” (Vos & Buckner, 2016, p. 304). Whether the media overexaggerates an issue, the lasting effect of information retention

(or lack thereof) remains. Furthermore, does the framing of the crisis result in retention of information, or is the CBC primarily focused on external motivations? In other words, regardless of the amount of relevant information and involvement with stakeholders, framing a crisis may result in a miscommunication of the issue.

Returning to Swalve and DeFoster (2016), this research will determine how the CBC frames the opioid crisis using historical lenses of previous illicit drug crises. Like non-drug related health crises (i.e., infectious diseases), communicators of illicit drug crises often frame the problem in terms of blame or fear. Non-drug related health crises suffer from framing in the same way as illicit drug crises. For example, during the 2003 SARS outbreak in Toronto, which claimed the lives of forty-four individuals, a biased and heavily racialized narrative framed the crisis. Often framed as the “Chinese disease,” the SARS outbreak became synonymous with xenophobia at the time (Seeger, Sellnow & Ulmer, 2008). Serious issues like the SARS outbreak tend to fall along racial or cultural divides, especially considering the extent that the outbreak claimed several lives and was global in nature. However, the level that bias (i.e., fear, opinion, social difference, etc.) occurs in non-illicit drug crises varies drastically during illicit drug crises.

When we look at illicit drugs, “designer drugs,” or drugs popularized in the media (i.e., marijuana, cocaine, heroin, ecstasy, methamphetamines, etc.), they involve interpretive cultural connotations that influence how we perceive the drug (Swalve & DeFoster, 2016). In other words, health crises involving illicit drugs naturally lean towards framing bias, instead of regular disease discourse. For example, during an influenza outbreak, the primary goal of the crisis communicator could involve information, knowledge translation, preventative measures, and public safety. During an illicit drug crisis, the primary goal of the crisis communicator could involve fear, political

opinion, moral justification, and stereotypes of the users. By comparing the narratives of non-illicit drug crises and illicit drug crises, this research can determine where the opioid crisis sits in terms of framing.

c. Crisis & Healthcare Communication Theory

The third pillar of this Major Research Paper draws from two schools of theory: crisis communication and healthcare communication. To have a comprehensive analysis of how the CBC frames the opioid crisis on Twitter, the addition of communication theory provides a solid foundation for research. With tested hypotheses, the research can both build on existing theories surrounding framing and social media, but also establish itself as a unique frame of analysis. Seeger, Sellnow, and Ulmer (2008) provide an analysis of crisis communication within the healthcare field.

The authors of the book outline many theories that aid in the framing analysis of the opioid crisis. More specifically, Seeger, Sellnow, and Ulmer (2008) use the Crisis and Emergency Risk Communication (CERC) framework. With supplemental research from Veil, Reynolds, Sellnow, and Seeger (2008), the CERC framework proposes: (1) “risk and crises are equivocal and uncertain conditions that create specific informational needs,” (2) “two-way communication activities are necessary for the public (in addition to agencies and stakeholders),” (3) “communication processes will change dramatically as a risk evolves into a crisis,” (4) “risk and crisis communication are interrelated such that risk messages influence perceptions, expectations, and behaviour,” (5) “communication is consequential to a specific risk and crisis management outcome by promoting self-efficacy,” and (6) “risk and crises affect a wide variety of publics with variable needs, interests, and resources, which in turn affects their communication capabilities, needs, and activities” (Veil, Reynolds, Sellnow & Seeger, 2008, p. 31).

The CERC framework is beneficial in terms of a theoretical perspective and a practical perspective. As the Veil, et al. (2008) note, the CERC is a theory, but also a useful, integrated framework of risk and crisis communication that also pushes the research agenda (Veil, Reynolds, Sellnow & Seeger, 2008). At the same time, by using this specific theory, the following research can address a variety of practical examples through the CERC lens. Specifically, the research can address techniques and strategies used by the CBC, but also shortcomings and gaps in communication.

Moving forward with the theoretical analysis of crisis and healthcare communication, Gesser-Edelsburg, Shir-Raz, Walter, Mordini, Dimitriou, and James (2015) provide research that the previous literature does not directly address: what stakeholders are involved in the public sphere, how does research define a stakeholder, and how do stakeholders affect the framing of content (and therefore public perception)? It is important to understand a stakeholder's relationship and connection to a specific issue and crisis. However, the term "stakeholder" is quite broad and encompasses a large group of organizations, individuals, and parties. By incorporating the research by Gesser-Edelsburg, et al. (2015), the Major Research Paper can refer to specific actors, instead of a broad organizational structure. For example, the role of opinion leaders (i.e., influencers that do not hold official power) and stakeholders (i.e., pharmaceutical regulatory agencies, health ministries, and hospitals) play an incredible role in disseminating information (Gesser-Edelsburg, et al., 2015).

In terms of framing, understanding the stakeholders involved in the online conversation is of utter importance. The following research may conclude that no mention of a stakeholder exists in a post. However, the content could very well focus on a specific stakeholder without mentioning their name (i.e., based on the timing of the

post relative to a certain event, for example). Without knowing the primary stakeholders in the opioid crisis conversation, we take the content published from the CBC at face value. By consuming information without understanding the primary stakeholders, readers may believe bias or a complete reframing of the issue. Readers may not understand how internal or external motivations shape news content. Furthermore, readers may believe information that echoes prejudice and bias, drawn from previous drug crises (i.e., crack cocaine, methamphetamines, etc.).

Finally, we must take a step back and apply several social media communication theories to the broader issue. The following research focuses on the framing of content online, not social media as a tool for communication. However, without understanding the capabilities of social media (i.e., Twitter), we cannot fully understand the reasoning behind a narrative or strategy. Sheldon (2015) provides an overview of social media principles and applications relevant to a healthcare crisis, but also other related fields (i.e., politics, education, natural disasters and advertising). By using multiple lenses of analysis in this research, the MRP can appropriately address issues originating outside the opioid crisis, but within the social media realm. For example, multiple actors are involved in the opioid crisis (i.e., hospitals, individuals, and governments). At the same time, the crisis also creates various narratives of stigma and tokenism. Without understanding how Twitter, as a platform, allows for the sharing of a specific narrative, we would not be able to address why additional narratives occur directly.

viii. Methodology

a. Data Collection

Returning to the primary research questions of this Major Research Paper, this research address first, how the CBC frames the issue of opioid usage in Canada. Next,

this research addresses the nature of the dialogue occurring because of the CBC's Twitter presence. More specifically, which CBC strategies yield the most response in terms of vanity metrics (i.e., likes, retweets, and comments). Finally, this research discusses fluctuations and outliers in news coverage by the CBC (directly due to socially or politically driven events, for example). The best method to adequately answer these research questions, a quantitative and qualitative analysis of 116 tweets was conducted. The sample involves tweets posted on the CBC's Twitter account (@CBCNews) between April 1st, 2017 and April 1st, 2018.

According to Moon and Hadley (2014), "Twitter has distinctive characteristics that allow it to function as a more prominent partner for news media than other social networking sites" (Moon & Hadley, 2014, p. 289). The authors argue that the retweet and hashtag features most prominent on Twitter enable the platform to "work like a broadcast medium," which allows minute-by-minute coverage of events (Moon & Hadley, 2014, p. 289). Facebook has similar functionality, but the use of hashtags, for example, are not as popular. Furthermore, Facebook may promote large-breaking stories, whereas Twitter may promote smaller "as it happens" content (with the possibility of large-breaking stories included as well). Because the platform is built for these purposes, Twitter is the primary focus of research. A comparative analysis of Twitter content compared to Facebook content is worth researching and would yield additional data on the opioid discussion.

With Twitter as the primary platform under analysis, this research examines tweets between April 1st, 2017 and April 1st, 2018. This timeframe was chosen because: (1) relevancy and (2) technological and platform changes. With regards to relevancy, because it spans more than one-year, it would be difficult to paint a relevant picture of

the opioid discussion if the research included multiple years, for example. A variety of events occurred that may change the narrative of the opioid crisis (i.e., elections, CBC staff changes, etc.). Furthermore, the way that a community discusses opioids changes over time (i.e., word usage, slang, focus, etc.). In addition, a one-year sample period ensures that the platform under analysis remains somewhat the same. In November of 2017, Twitter officially doubled the character limit from 140 characters to 280 characters. Simple platform changes like a character limit increase can drastically alter the way that the CBC communicates online. Additional changes (i.e., algorithm, organizational, media restrictions, etc.) are also prominent as the time frame expands; this is due to the evolving nature of social media. As a result, a 12-month time frame is most relevant.

To collect the data, all 116 tweets were manually read and transferred to Microsoft Excel. Most likely, there are other methods to collect the data. However, this method allowed a complete and individual analysis of each tweet and each photo in question. Organizing the data within the excel spreadsheet was also completed manually. Most of a tweet's composition is incredibly crucial for analysis. Therefore, the data collection considered all available information from a post itself (i.e., date, text, and vanity metrics). As a result, the research classifies certain aspects of the tweet into fourteen categories:

- Keyword
- Secondary Narrative
- Crisis Acknowledgment
- Tweet Text
- Narrative Keywords
- Tweet Type
- Date Posted
- Secondary Narrative Keywords
- Comments
- Narrative
- Likes
- Retweets
- Photo Inclusion
- Photo Narrative

See "Appendix A" for a complete definition of each category. As this research primarily focuses on the narrative, secondary narrative, crisis acknowledgement, vanity

metrics (i.e., comments, retweets, and likes), and photo narrative, each requires individual attention and definition.

1. *Narrative & Secondary Narrative*

According to DiStaso, et al. (2015), “there is an urgent need to study what type of crisis response strategy is important during an unfolding crisis” (DiStaso, Vafeiadis, Amaral, 2015, p. 222). Because of the ever-evolving media landscape, there are several different opportunities to communicate crisis to the public. Choosing the appropriate medium to communicate is difficult to determine. Furthermore, if the crisis communication response strategy is not appropriate, the medium will not matter. Although their study primarily focuses on Facebook, the authors discovered that the companies studied failed to convey appropriate situation responses. In other words, the organizations analyzed in their study did not use appropriate language, nor did they convey a narrative that elicits a productive crisis communication strategy. This research aims to ask similar questions to those posed in the study by DiStaso, et al. (2015).

In their study, DiStaso, et al. (2015) categorize the narrative strategy in terms of “apology,” “sympathy,” and “information.” This framework is utilized in the classification of possible CBC tweet narratives. However, because the subject of analysis (the CBC) is different than the subject in the previously mentioned study, additional categories are required. Furthermore, because the data collected uses a range of narratives, the categories were not limited to apology, sympathy and information. Using a similar approach, this research categorizes the data in “ambiguity,” “call to action,” “fear and/or panic,” “information,” “political,” “sensationalism,” and “sympathy” narratives.

In addition to the narratives, for the sake of this research will be defined as “primary narratives,” this research also utilizes a “secondary narrative” classification.

Each of the classifications remain the same within the narrative framework. However, because certain posts cannot and do not fit a single classification, a secondary narrative classifies the tweet as well. For example, on March 27th, 2017, the CBC tweeted, “It will soon be easier for Canadian doctors to prescribe methadone and (pharmaceutical-grade) heroin” (CBC News, 2017) [\[4\]](#). This tweet is classified as both sensationalism and ambiguity. The sensationalism narrative is primary, as the tweet conveys the shocking idea that drugs will be more readily available to the every-day Canadian. However, the ambiguity narrative is secondary, as the tweet does not convey how or why drugs will be more readily available. For this reason, to be more precise in the following analysis, a secondary narrative classification is necessary. The definition of each classification are:

- **Ambiguity:** a strategic attempt to infer multiple meanings, outcomes or stances on an issue or event. This narrative strategy is purposely ambiguous to entice the reader to click through to their website (**see Figure 1**).
- **Call to Action:** encouraging the audience to elicit a specific response, the description of an action that caused an event, or the strategic description of action leading to a specific decision (**see Figure 2**).
- **Fear and/or Panic:** a narrative specifically used to incite fear or panic. These posts do not provide in-depth background, but numbers or statements create an alarming and emotional response (**see Figure 3**).
- **Information:** generally, this narrative is the assumed voice of an unbiased press. This narrative tends to remove any bias or preconception and is strategically used to inform the audience on the issue at hand (**see Figure 4**).

- Political: a specific strategy to point to a political ideology or to cause strife towards a political party or figure (see **Figure 5**).
- Sensationalism: this narrative tends to exaggerate the issue or a certain facet of the issue. Generally, this type of narrative intends to shock the audience into reading further. This narrative is compared to a tabloid story present in celebrity or popular culture (see **Figure 6**).
- Sympathy: this narrative focuses on a personal story or the feelings of an individual. Unlike the fear and/or panic narrative, the response this narrative primarily involves sadness or sympathy, and attempts to relate to the broader audience as if they are experiencing the event themselves (see **Figure 7**).



Figure 1. Example of the “Ambiguity” classification



Figure 2. Example of the “Call to Action” classification



Figure 3. Example of the “Fear and/or Panic” classification



Figure 4. Example of the “Information” classification



Figure 5. Example of the “Political” classification



Figure 6. Example of the “Sensationalism” classification



Figure 7. Example of the “Sympathy” classification

2. *Crisis Acknowledgment*

Word usage can shift perception during a crisis or newsworthy event. Language changes specifically can make the difference between alienating or helping a vulnerable demographic. During a health crisis, whether disease or drug-related, appropriately addressing realities, struggles, and misconceptions may save lives. According to Collins, Bluthenthal, Boyd, and McNeil (2018), “Calls for reframing how we talk about substance use are not new, with evidence underscoring the impact of discourse on reinforcing stigma and undermining engagement in needed health and other social services” (p. 77). By using language that promotes safety and works against social stigma, the CBC may enable wider support for those affected by the opioid crisis, while

encouraging a “rapid roll-out of life-saving interventions” (Collins et al., 2018, p. 77). As a result, the following research uses the collected data sample and counts the word frequency of terms like “crisis,” “epidemic,” “catastrophe,” “dilemma,” “disaster,” and “emergency.” By collecting this data, this research can determine whether the CBC plays a roll in removing (or reinforcing) stigma and promoting life-saving interventions.

3. *Vanity Metrics & Performance*

In addition to the word count for phrases like “crisis,” and the complete narrative analysis of each tweet, this research also catalogs the performance of each post through vanity metrics. As a post in Twitter consists of three specific metrics (i.e., comments, retweets, and likes), three categories were created using Microsoft Excel. The following research organizes the collected data in terms of performance (i.e., most comments, most retweets, and most likes). Analyzing vanity metrics allows the research to determine which type of posts (with the associated narrative and secondary narrative) yield a more significant response from the CBC’s Twitter audience. At the same time, the research can make inferences towards a deliberate strategy. For example, if the CBC knows that its users respond to shocking content, will they continue to promote a narrative that elicits an appropriate response?

b. Data Analysis

The following research focuses on two different methods of analysis, with both methods applied to address the research questions. Primarily, this research conducts a discourse analysis of the opioid crisis as communicated by the CBC’s Twitter account (@CBCNews). However, the research also conducts an attribution analysis of the opioid crisis. Because the opioid crisis involves a variety of demographics and stakeholders, this research also considers whether the CBC attributes or blames the crisis on a

specific group. According to Morin, Eibl, Franklin, and Marsh (2017), public opinion of opioid use in Ontario, particularly within the last decade, “shifted from the discussion of drug users as criminals, and addiction as a character flaw” (Morin, Eibl, Franklin, and Marsh, 2017). This research emphasizes the parties and stakeholders involved, and how the CBC refers to them, to determine if the authors’ (2017) claims are valid. In this regard, has the public opinion of opioid use shifted from a blame-centric model towards problem-solving model?

c. Limitations

This study experiences a series of limitations, primarily due to the length of the Major Research Paper, resources, and time constraints. The primary limitation of this research is the use of NVivo to conduct the textual analysis of each social media post. Due to technical issues, the research does not make use of the software as a method of analysis. For future research, the use of NVivo could add an additional layer to the understanding of each post by the CBC.

Another limitation of this research is the lack of interviews with stakeholders involved with the CBC’s Twitter account. These stakeholders include social media managers, strategists, external social media specialists, healthcare professionals, and average individuals within the CBC’s audience. By including interviews with these stakeholders, the research could highlight in greater detail the meaning, messaging, and purpose of the collected data. For the sake of this analysis, interviews are not included.

In addition, as previously mentioned, Twitter doubled the character limit from 140 characters to 280 characters in November of 2017. Because this change occurred within the research timeframe, it is important to note that this research includes tweets with both 140 and 280-character limits. Additional analysis can determine how the narrative

changes over time based on the character limit change. Nevertheless, this research takes the same method of analysis to understand the narrative of each tweet regardless of the accepted character limit.

Although this research analyzes the content of the tweet, it does not mean that the content of the tweet is the same as the headline of the associated article. For future research, specifically involving a content analysis of Twitter posts by a specific news outlet, there should exist a discussion on the differing textual and narrative structure between tweet and article headline. Because individuals may only consume the content of the tweet, they may disregard the headline of the article. This reality has consequences for information consumption; but, it is beyond the scope of this research.

Lastly, another limitation of this research is perspective. Because this research does not include additional research methods (i.e., surveys, focus groups, etc.), the categorization of the data is of the author's. If additional ways existed to categorize the data and analyze the photo narratives, the research could be less subjective. Of course, measures were taken to be as scientific as possible with the data. However, a post that would be considered "sensationalism" in this research might be "fear and/or panic" to a member of the CBC's audience. For this reason, the secondary narrative classification exists to be inclusive of alternative options. Nevertheless, due to a lack of resources and time, a more comprehensive analysis is not possible.

ix. Findings & Analysis

The following paragraphs discuss the findings relevant to the entire research. More specifically, the following paragraphs discuss the four primary focuses of analysis: whether the CBC frames opioid usage as a crisis, which narratives are most predominant in the opioid discussion, which narratives performed best with the CBC's

audience (through the analysis of vanity metrics), and lastly, which narratives the CBC used images associated with their posts.

a. Avoiding or Capitalizing on the “Crisis” Narrative

Before examining the narrative of each post from the CBC Twitter account (@CBCNews), one of the primary focuses of this research is to determine whether the CBC uses a “crisis” narrative in general. This question primarily relates back to the first research question: “How does the CBC frame the issue of opioid usage in Canada?” Of course, the analysis will become more nuanced in the paragraphs to follow. However, it is important to look at the narrative of the Twitter posts not only from a refined and categorized perspective but also from an overall “bird’s eye view” perspective. If the CBC does not use the term “crisis” when referring to issues surrounding the opioid discussion, the narrative becomes non-crisis oriented. As a result, the social media strategy and narrative strategy will mimic a non-crisis response.

Of a total 116 tweets from the CBC’s Twitter account, the term “crisis” appears 26 times. Therefore, the term “crisis” does not appear in the tweets 90 times. To put these numbers into perspective, of the whole opioid discussion included in the sample, the situation is referred to as a “crisis” only 22.4% of the time. As such, the situation is not referred to as a “crisis” 77.6% of the time. Whether the discussion warrants the usage (or lack thereof) the term “crisis” for moral reasons (i.e., the CBC has a duty to frame the situation as a crisis) will not be determined by this research. However, in a situation commonly associated with the terms “crisis,” “epidemic,” “problem,” and “emergency,” the crisis narrative is non-existent. When a large portion of the discussion utilizes the terms mentioned above, the CBC’s exclusion of the terms is quite alarming. For the

sake of additional context, the associated terms (i.e., epidemic, problem, and emergency) are included in “Appendix B” with full results.

According to Swalve and DeFoster (2016), “the mass media have repeatedly and cyclically created conditions for moral panics regarding drug use, describing the use of drugs such as cocaine, crack, or heroine as plagues or epidemics” (p. 104). In their analysis, the authors point out that a so-called “designer drug” narrative is promoted largely because of their emotional and moral response from the public. These designer drugs, not to be confused with the “designer drugs” that are the controlled substances that mimic the effects of other well-known drugs, are typically high-profile and well-known for their prevalence in popular culture and their portrayal by the media. In the case of the opioid situation, it appears that because most opioids are not “designer drugs,” they do not warrant the same communication strategy (i.e., capitalizing on moral and emotional responses). In other words, because the opioid crisis does not include the use of drugs like cocaine, crack, heroin, marijuana or methamphetamines, the media does not acknowledge a crisis or epidemic.

If the CBC does not regard the current situation as a crisis, at what point does the situation evolve into a crisis? Furthermore, at what point do non-designer drugs create enough traction to warrant an increased promotion from the media? There are many definitions of a “crisis,” specifically in terms of crisis communication. For Koerber (2017), a crisis typically resembles as “a non-routine, severe event that could destroy an organization’s or individual’s reputation or operations.” In addition, “private companies that respond poorly to a crisis may go bankrupt, wiping out investments and jobs” (Koerber, 2017, p. 1). In this sense, the author (2017) regards a crisis as something that is primarily business, economic or corporate-related. For the opioid crisis, the economic

nature of the situation is incredibly interesting. Unlike other drugs popularized by the media, opioids are entirely legal when prescribed by a doctor. Furthermore, opioids are lucrative for pharmaceutical companies. As the scope of this research is limited, these are questions for future analysis. However, because there are many different investors, stakeholders, and individuals involved in the pharmaceutical industry, is the definition of a crisis tainted for financial reasons? If a private company is entangled in a scandal or crisis-level situation, will the media acknowledge the opioid epidemic as a crisis?

Based purely on the analysis of the 116 tweets issued by the CBC, a “crisis” narrative does not exist. The reason to avoid the term “crisis” (and the associated terms) is not apparent, nor can this research confirm the decision. Instead of outright stating that the opioid crisis exists, this research must analyze the narrative of the sample tweets. There exists no definitive way to determine the strategy behind the CBC’s social media narrative choice, other than directly interviewing staff members.

Because communication through Twitter is quite limited (i.e., word count), communicators of all industries must be concise and specific in their word choice. In terms of a narrative analysis, the word choice of a tweet carries a large magnitude. As a tweet only represents part of a more extensive discussion, generally followed by an even more extensive article, the content of the tweet may be all that a user reads. At the same time, a tweet represents an immediate “snapshot” of the larger issue. In other words, a tweet can be both abstract and incredibly specific. The interpretation of the tweet can fluctuate drastically. According to DiStaso, Vafeiadis, and Amaral (2014), “immediate access to information breeds the rapid dissemination of misinformation that can distort events” (DiStaso, Vafeiadis & Amaral, 2014). The platform relies on the rapid dissemination of information. As a result, users may only read and analyze the text

portion of the tweet (instead of clicking on the associated article’s link, for example). The following paragraphs illustrate a complete analysis of the CBC’s tweets in terms of narrative and image rhetoric.

b. “Pushing” the Opioid Discussion: Narrative Findings

Seven different narrative classifications exist in the analysis of the CBC’s Twitter account (@CBCNews). The classifications are: “ambiguity,” “call to action,” “fear and/or panic,” “information,” “political,” “sensationalism,” and “sympathy.” The analysis of CBC’s Twitter account also includes an additional “secondary narrative” categorization. Each secondary narrative classification is the same as the primary narrative categorization. Instead, the secondary narrative does not control the larger (primary) narrative of the post. Furthermore, the classifications remain the same for the secondary narrative (with a variety of posts lacking a secondary narrative entirely). The results of the narrative analysis are as follows:

Primary Narrative	Total (Out of 116 Tweets) ¹
Information	47 (40.5%)
Sensationalism	22 (19%)
Fear and/or Panic	18 (15.5%)
Call to Action	9 (7.7%)
Sympathy	8 (6.9%)

¹ This number represents the entire tweet and considers every word within the tweet (instead of certain phrases, for example).

Political	7 (6.1%)
Ambiguity	5 (4.3%)

Based on the data above and the sample collected from the CBC’s Twitter account, there is an overwhelming “information” narrative. In fact, the “information” narrative is larger than the second and third most prevalent narratives combined. However, as previously discussed, the way that an audience perceives the narrative of a tweet can vary quite drastically. In this regard, the secondary narrative becomes essential in illuminating the bigger picture of the opioid discussion. In certain circumstances, the audience may perceive the primary narrative immediately. Alternatively, the audience may perceive the secondary narrative immediately. Because Twitter posts are quite limited in scope, subjectivity is quite apparent. Without additional research, through a survey for example, it is impossible to determine how an individual perceives a narrative. The secondary narrative helps mitigate these concerns. Only a total of 87 out of the entire 116 posts offer a secondary narrative:

Secondary Narrative	Total (Out of 87 Tweets)
Information	21 (24.2%)
Ambiguity	20 (23%)
Political	14 (16.1%)
Fear and/or Panic	12 (13.8%)

Sensationalism	10 (11.5%)
Call to Action	5 (5.7%)
Sympathy	5 (5.7%)

The research can determine that from the data, the CBC’s primary narrative motivations are to inform the audience. With most online news sources, as information is increasingly available, and the potential for bias is high, objectivity is always a question (Ruggerio, 2004). In this case, the CBC at least attempts to provide information in a manner that is useful and beneficial to its audience. The data overwhelmingly supports that the narratives associated with the opioid discussion are intended to inform, instead of provoking or confusing. However, the secondary narratives associated with each post are quite alarming.

With the majority of the posts falling under the “information” narrative, a majority of secondary narratives fall under the “ambiguity” narrative. In other words, although the CBC promotes a generally unbiased perspective of the opioid crisis, their posts could generate a large amount of confusion. Instead of simply painting a picture of the opioid discussion, the CBC relies on confusion to encourage clicks (i.e., directing their audience from Twitter to their main website). Through this understanding, the “information” narrative becomes more about providing information with the potential to mislead than providing information to help the audience understand the situation. In other words, providing intentionally confusing content may lead to additional clicks. Nevertheless, the research can conclude that the CBC’s Twitter strategy generally focuses on providing the audience with relevant information, instead of provoking fear.

When discussing healthcare-related crises, provoking fear and panic (for example) is an easy route to take, as it generates continued readership.

c. Buying the Opioid Discussion: Vanity Metrics

Although vanity metrics are critical indicators of how well a post performed, they are not a complete measure of success or failure for a few reasons. First, vanity metrics are a representation of how the CBC's immediate audience reacted to the content. In some cases, an extended network may see specific posts (i.e., due to retweets). However, vanity metrics only represent a portion of the population that saw the tweet. Generalizations about the broader public can exist, but they are not certain. Second, only the administrators of the CBC News account can see the full analytics of a tweet (i.e., impressions, link clicks, and detail expands). The vanity metrics may not adequately represent the population, because additional hidden metrics are not available to the public. Lastly, the audience may click "like" or "retweet" without reading the content. Regardless, analyzing vanity metrics provides the most available data on performance while also considering narrative.

Regarding comments, the top five posts have a primarily "political" narrative (a total of four) with the additional post categorized as "information." Please refer to "Appendix C" for complete results. In this case, it appears that the CBC's audience is increasingly willing to comment on politically-driven content. According to Xenos, Vromen, and Loader (2013), the increasing engagement with political content is not an implausible concept. In fact, a variety of studies show that audiences on social media positively respond to the ability to engage in a civic discussion online. Furthermore, political opinions tend to vary quite drastically, which creates a platform to vocalize opinion (by physically writing thoughts in the comment section) (Xenos, Vromen &

Loader, 2013). However, this research must note that people who are likely to engage in political discussion may likely do so, even without the use of social media. The sample may not represent an entire population, rather those that are already involved in politics. Nevertheless, the “political” narrative generates the most substantial amount of opinion on the CBC’s Twitter page. If the CBC decided discussion and direct text engagement is important to their strategy, they might send a politically-driven post to their audience. In this case, it will elicit a broader conversation on their page.

Regarding retweets, the top five posts appear entirely different from the comment metrics. In this case, one post is categorized as “sympathy,” two posts are categorized as “sensationalism,” and two posts are categorized as “information.” Please refer to “Appendix D” for complete results. Because these findings are quite general, this research speculates that the CBC’s audience does not intend to directly share content of other categorizations (i.e., call to action, political or ambiguity). These results could mean the CBC’s audience: relates to the “sympathy” narrative, finds the “sensationalism” narrative shocking (which would warrant sharing with friends), or finds the “information” narrative useful or interesting enough to share as well. However, when looking at the next highest retweets, the following four include two “fear and/or panic” and two “sensationalism” narrative posts. As a result, these narratives may result in a more visceral or emotional response, which would encourage the audience to retweet the content to their audience.

Finally, in terms of likes, the narrative categorizations look like the retweet metrics. In this case, three posts are categorized as “information,” one post is categorized as “sympathy,” and one post is categorized as “sensationalism.” Much like the retweet metrics, the findings are quite general. However, expanding the number of analyzed

posts (i.e., including an additional six), the research finds that the following tweets include four “information” narrative posts, one “sensationalism” narrative post, and one “political” narrative post. In other words, the CBC’s audience may relate most to posts that do not push a motive or agenda. The “information” narrative, as previously mentioned, tends only to promote facts, numbers or figures related to the opioid discussion. Instead of trying to evoke anger or conflict, these types of posts directly provide additional background to the discussion. Based on the number of likes, it appears that the audience responds (and understands) when the CBC remains unbiased and objective.

d. Image Rhetoric Analysis

From a purely visual perspective, most of a tweet’s composition is the image associated with the content. The platform allows 280 characters, an increase from the previous 140 characters. Although 280 characters may seem like a small amount of text to convey a complicated topic like the opioid crisis, the Twitter platform, a mini blog, thrives on this model. Because character length is limited, Twitter encourages more concise and direct statements. In addition, users can include additional customization to their post through images without subtracting from the overall character count.

If a post includes an image, the image can make up anywhere between 50-75% of the tweet itself (visually). The presence of an image is essential for many reasons. For example, if a regular reader of the CBC’s Twitter feed primarily assesses the worth of a post based on the existence of a visual, they may be inclined to read or engage (i.e., like, share or retweet) with the article. In addition, the image can frame the text and the interpretation of the tweet. As a result, the visual may determine the overall success of the post, measured explicitly by vanity metrics. On the other hand, if the Twitter post

includes an image that is controversial, shocking, informative or geared towards a specific stakeholder, users may or may not engage with the content based on the intended audience. Because something as simple as an image can shape the performance of a post, this research must analyze image usage in the tweet sample.

To provide an adequate analysis of the photos associated with each Twitter post, this research categorizes the photos into ten separate categories (person, drug, prescription drug, drug user, political, miscellaneous, authority figure, N/A, information, and death). Specific categories have subcategories to allow for further clarification. For the sake of this research, it is important to distinguish “person” from “drug user” and “prescription drug” from “drug.” By no means does research suggest drug users are not people. Instead, the strategic photo usage of a drug user is important to distinguish. Images including drug users are often quite graphic and evoke a more visceral and emotional response (see Figure 8, for example). Images of individuals, on the other hand, are not as emotionally evoking (see Figure 9, for example). If the CBC intended to engage users strategically or to catch the eye with an image that is more visually shocking, they might use an image of a drug user (instead of a safe injection site, for example). Because they speak to different audiences, events, and severities of an issue, the categories require differentiation.



Figure 8. Example of the “Drug User” classification

Figure 9. Example of the “Person” classification

Defining “prescription drug” and “drug” is also vital for the sake of this discussion. Much like the previous distinction of a person from a drug user, a prescription drug photo compared to a drug photo could yield different results in performance and narrative. Prescription drugs may yield a minor emotional response; they may seem scientific or related to the advice of a doctor in times of illness. Drug photos, on the other hand, have the potential to yield a more visceral response (much like the drug user photo classification). For example, **Figure 10** represents the “prescription drug” classification. Most people are aware of prescription drugs and their appearance. With the drug classification, on the other hand, images may appear more shocking for those not versed with the subject matter. In this case, the CBC may use a drug image to shock the audience. Refer to **Figure 11** for an example of the “drug classification.”



Figure 10. Example of the “Prescription Drug” classification



Figure 11. Example of the “Drug” classification

Out of a total 116 tweets from the CBC’s Twitter account, only a total of 4 posts did not contain a primary image (i.e., a photo attributed to the linked article or even a thumbnail image that previews an embedded video). For the posts that included an image, the most common classifications were, in order: (1) Person, (2) Drug, (3)

Prescription Drug, (4) Drug User, and (5) Political. For complete results, including the frequency, please refer to “Appendix F.”

The results begin to construct an overall image of the CBC’s framing and narrative strategy, explicitly using strategic imagery. The most common classification, the “person” classification, shows that the CBC aims to personalize the issue. Of course, the content of the article will decide the choice of imagery. If the primary narrative of the CBC’s content involves a person, individual or a personal story, the image will reflect a person. However, the fact that the “person” classification is most prevalent speaks to the intended narrative of the overall content, without directly reading the accompanying articles first. Because the account predominantly uses the “person” classification, the CBC may suggest that the opioid crisis is an issue for everyone. Using this type of imagery evokes a feeling of relatability, possibly drawing on personal emotions.

Furthermore, although the main usage of “person” imagery involves adults, most of which have unknown identities without reading further into the article, the CBC creates an implied narrative of those affected (or possibly affected) by the opioid crisis. Instead of predominantly using photos of children, celebrities or those who appear below the poverty line, the CBC implies that the opioid crisis is an issue for adults in general. Without context, the CBC leaves the reader to infer the type of person most likely to suffer from an opioid addiction. With any situation, descriptions and definitions should lead in the direction to concrete facts (i.e., to limit confusion, bias, and blame).

Of course, an image alone cannot speak to those affected by the opioid crisis, mainly because the crisis spans multiple demographics. To capture an individual dealing with mental illness (for example) or living in a particular neighbourhood is difficult to capture in a photo. Also, obtaining photos of individuals within a specific demographic or

cluster is quite difficult. At the same time, obtaining these photos would infringe on the privacy of those affected, while being morally and ethically questionable. In the end, however, the strategic use of adults in the photo may regard the CBC's readership to appear more relatable. Without further research (i.e., interviews with the social media team), this assumption is unknown.

ix. Discussion

As previously mentioned, this research intends to address how the CBC frames the issue of opioid usage, primarily in Canada. Because of their framing usage, this research also addresses how the audience responds to specific content. By understanding narrative usage, the CBC's Twitter can paint a broader picture of the opioid discussion. In addition to the narrative analysis, the following paragraphs assess how successful the CBC's strategy was in terms of crisis communication (i.e., using both theoretical and hands-on practices), and how the CBC's Twitter posts fit within traditional understandings of crisis communication theory. By understanding how the CBC communicates, we can hold other news outlets to similar standards. In addition, we can understand the narratives of opioid use that Canadians are participating in (i.e., as opposed to only viewing). In the following paragraphs, the research directly relates the most relevant communications literature to the findings mentioned above.

a. Best Practices: Social Media Crisis Communication

As previously mentioned, Lin et al. (2016) believe best practices in social media improve professional practice during times of crisis. As the authors describe, crises are, by definition, novel, unpredictable, and require deliberate and immediate responses (Lin, Spence, Sellnow & Lachlan, 2016). Because our methods of communication are increasingly digital, social media plays an incredibly important role in communicating

crisis. However, if managed inadequately, news outlets run the risk of providing incorrect or delayed messages. Similarly, the public engages in the conversation, which requires all organizations communicating the crisis to respond immediately.

In “Crisis Communication, Learning and Responding: Best Practices in Social Media,” Lin et al. (2016) provide an in-depth framework for social media communication during a crisis. The authors’ “best practices” apply to a variety of fields, ultimately applying to healthcare crises and the opioid discussion as well. As a result, this research incorporates each best practice in the following paragraphs. However, because this research focuses on a news outlet, an additional layer of analysis is required. Because a news outlet does not work in the same capacity as a regular organization, this research also discusses whether news outlets should be held to the same level of accountability.

The first best practice that this research must evaluate is “actively engaging in dialogue online.” The authors suggest that organizations should engage with stakeholder concerns using hashtags and direct responses, for example. By doing so, organizations avoid a “one-way” stream of communication that does not facilitate a conversation (Lin, Spence, Sellnow & Lachlan, 2016). In this regard, the CBC does not utilize this best practice. In the entire data set, only two tweets utilized a hashtag (i.e., #Opinion, #BCEIxn17, and #BCVotes). Furthermore, the CBC Twitter account does not directly tweet to individuals; rather it is to relay their news content to its audience. In this sense, communication is one-way.

The next best practice that is increasingly relevant to this research is the “use of media affordances to provide credible sources of information (Lin, Spence, Sellnow & Lachlan, 2016, p. 602). As one of the most trusted news sources in Canada, the CBC does utilize this best practice on social media. Often citing information from the

authorities, mayors, premiers, the RCMP, health officials, and a variety of ministries, their content shows reliability through their sources. However, as a disseminator of crisis information, the CBC does not share content from outside their network. As a news outlet, not sharing external content is likely an attempt to remain unbiased. However, a lack of illuminating the issue from a variety of perspectives does not aid the discussion.

The next best practice is of the most important for appropriate social media use during a crisis. Specifically, this best practice involves the timeliness of responses and updates. This best practice directly addresses the research question, “How are fluctuations and outliers in news coverage accounted for by the CBC? Are socially and/or politically driven events the cause for timely posts?” Based on the graph below, we can see that timeliness generally remains the same. However, months like May of 2017 and October of 2017 stand out the most.

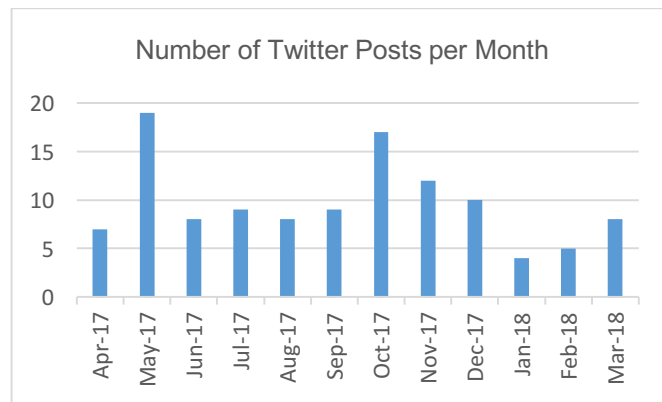


Figure 12. Number of Twitter Posts per Month

In May, a variety of events occurred that account for the fluctuation in communication. The first significant outlier is political; at the end of May, Health Minister, Jane Philpott ordered a review of opioid guidelines due to a conflict of interest. According to the Globe and Mail, the Health Minister wanted to review the standards for prescribing opioids, as many doctors had ties to the opioid industry (Globe and Mail,

2017). As a result, the CBC posted about this issue in six separate tweets (which is around the average post amount for other months). The next significant outlier is also political; on May 9, 2017, British Columbia held a general election. As a result, the CBC tweeted four separate times surrounding election issues (i.e., First Nations issues and other province's policies). Lastly, May saw a variety of studies and breaking news stories within the opioid discussion. For example, the CBC posted about increases in opioid usage, large legal settlements, legal cases, and medical developments (i.e., new treatments or potentially fatal drugs).

In October, we see a similar picture by the content of the tweets published by the CBC. Most tweets published in October are also political. However, the data suggest that the CBC increased the opioid discussion for two reasons: an increase of opioid-related deaths and a response to US President Donald Trump. Regarding opioid-related deaths, we encounter tweets like, "The number of babies born with an opioid dependency is rising" (CBC News, 2017) ^[8] and "As opioid overdoses spike, Ottawa health workers try giving addicts 'clean drugs'" (CBC News, 2017) ^[3]. In this sense, the CBC responds to an increased threat, much like one would during a crisis. As developments occur, the public should receive additional information. On the other hand, we encounter tweets like, "NDP pushes Liberals to follow Trump, declare opioid crisis a national public health emergency" (CBC News, 2017) ^[6]. In this sense, we can see how the United States influences Canada, especially with the opioid discussion.

Based on the information provided in the previous paragraph, we can determine that the CBC responds to developments in the opioid discussion. However, the response to newsworthy events does not necessarily mean a timely response. Although the CBC remains quite average throughout the months, the question remains as to

whether timeliness exists overall. Are these posts enough to effectively communicate a crisis? After all, communicating timely information to the public is a fundamental function of crisis communication (Kim, 2015).

If we were to analyze this situation as the “opioid crisis,” it must meet the criteria that would deem the situation a crisis. The terms “crisis,” “disaster,” and “emergency” are quite broad in their definition. According to the World Health Organization, these terms can mean the following: “Its greatest value is that it implies the possibility of an insidious process that cannot be defined in time, and that even spatially can recognize different layers/levels of intensity.” At the same time, these terms can mean “the occurrence in a community or region of cases of an illness, specific health-related behaviour, or other health-related events clearly in excess of normal expectancy” (World Health Organization, 2018). A variety of situations classified as a “crisis” result in a large response on social media (i.e., natural disasters, corporate scandals, and disease outbreaks), which resemble the definitions mentioned above. Instead, the opioid discussion retains a serious disconnect which undermines the intensity of the situation. As a result, we see the CBC posting about the opioid “crisis” only a few times each month, whereas a more obvious crisis would warrant the same amount of posts in a single day. In this regard, the CBC is not timely in their social media strategy and coverage of the opioid crisis.

The final best practice this research looks at is “cooperation with the public and similar organizations.” According to Lin et al. (2016), the nature of social media can “allow not only the government and media to work together, but brings the public into the conversation” (Lin, Spence, Sellnow & Lachlan, 2016, p. 604). When the public audience looks to social media to collect their news, social media plays a vital role in the

sense that the public can return communication. In terms of crisis communication, the ability to respond and open the lines of communication could potentially save lives. However, the case of the CBC, the @CBCNews Twitter account does not mention external organizations, nor does the account directly interact with individuals. With that said, the CBC does not function in the same way as an organization like the Red Cross.

The public looks to the Red Cross as an “on the ground” organization. Ready to help at a moments notice, these humanitarian organizations work alongside local and national stakeholders. In this case, it is natural to work with and mention external organizations for the sake of managing crisis (Koerber, 2017). News outlets like the CBC, on the other hand, are not held accountable or to the same standards to mitigate a crisis. Instead, the public looks to the CBC to merely communicate crisis. However, could the opioid crisis benefit from additional resources, like the CBC mentioning certain organizations or linking directly to government Twitter accounts?

Arguably, individuals could gain additional information from directly linked sources. In this regard, cooperating, communicating and integrating efforts with similar organizations would benefit the crisis conversation. The CBC is incredibly adamant when mentioning the involved parties (i.e., governments, cities, drug companies, etc.). However, the intent of mentioning the involved parties is to inform, not to redirect the conversation. The CBC does not link the content in the Twitter post to additional information, nor do they engage with the public in the comment section of each post. As a result, the CBC does not utilize this best practice to its full potential.

b. Assessing the Success of the CBC’s Efforts

Successful crisis communication is difficult to measure. As they are not confined to one sector, organization, or type (i.e., natural disaster, corporate, healthcare, etc.),

crises vary in structure and magnitude. Because of the ever-changing nature of crises, we can gauge the usefulness of the strategy, much like the topics discussed in the previous paragraph. In addition, research by Hadi and Fleshler (2016) suggests that the level of integration of social media in a crisis situation demonstrates the success of crisis communication efforts as well. Using the authors (2016) research, three specific areas of integration will assess the success and usefulness of the CBC's communication strategy when discussing the opioid crisis: the level of situational awareness, the success of the messaging, and the management of misinformation.

When assessing situational awareness, which Hadi and Fleshler (2016) define as, "having a mechanism in place to ensure relevant, timely, and accurate social media information is gathered and shared" (Hadi & Fleshler, 2016). This measure of success is similar to the timeliness "best practice" by Lin et al. (2016). However, situational awareness goes a step further to assess whether the information is correct during a crisis. For example, Hadi and Fleshler (2016) use the example of the New York City Ebola outbreak of 2014 stating, "news organizations began reporting the name of the patient and inaccurately reporting his actions the day before hospitalization" (Hadi & Fleshler, 2016). In this regard, the CBC fares well when discussing factual evidence. From the data collected, the CBC do not accuse or assume the fault of an organization or individual. Instead, like a trustworthy news source, the CBC states the facts based. These facts are from scientific studies or government officials, which ensures a high-level of accountability. In terms of communicating factual information, the CBC is useful.

However, Hadi and Fleshler (2016) also suggest that successful crisis communication involves the management of misinformation. Because Twitter is entirely in the hands of the profile manager, determining the method of handling misinformation

is difficult from a research perspective. As the scope of this research is limited, there is no method to determine whether the CBC deletes incorrect information or whether they replace the tweet with the correct information. The only way to understand the news outlet's management of a lack of in-depth information is through posts that are tagged as an "update" or those that refer to a previous study. From the collected data, the CBC has not posted an update to a story or study, nor have they directly acknowledged an error in communication. Instead, the CBC promotes breaking content, primarily new studies involving opioid usage or opioid-related deaths. In other words, there is no causal linkage between each post to determine if any misinformation was mitigated. Furthermore, if the account provides a development on an issue, situation, or study, the narrative tends to be profoundly political or involve the legal case of a drug company.

In a successful scenario, the CBC could promote the temporal changes of the opioid crisis (i.e., amount of safe injection sites opening over time, amount of prescription drugs sold legally, amount of overdoses over time, etc.). Instead, there is a lack of accountability for previous developments. For example, the CBC notes, "2,000% rise in street drug samples testing positive for fentanyl" [\[2\]](#) (CBC News, 2017). There are a variety of questions that are unanswered from this information: What defines positive testing? A 2,000% rise from what level previously? Which drug does the study include? Unfortunately, the questions are endless. As a result, the research determines that the CBC lack a level of monitoring misinformation, at least to the extent that a timeline does not exist to confirm developments or changes in the crisis.

Finally, the research must assess the success or failure of public messaging. Fortunately, the CBC excels in tailor-made, professional, and coherent content. As one of the leading news sources in Canada, the CBC holds itself to a high-standard of story-

telling and social media production (i.e., non-laborious text, correct grammar, a non-distracting graphic, etc.). Because this research focuses on two primary frames of analysis, narrative, and crisis, the CBC's quality content must also apply to these areas. Hadi and Fleshler (2016) write, "inevitably, regardless of how well written the message, there will be no further questions and potentially confusion" (Hadi & Fleshler, 2016, p. 776). If we looked at a crisis like the Johnson and Johnson's Tylenol scandal of 1980, we can see how accurate, timely, and unambiguous information can result in effective crisis communication (Olaniran, Scholl, Williams & Boyer, 2012).

This health-related crisis, not dissimilar to the opioid crisis in many ways (i.e., unknown effects of ingestible medicine), received praise for how the communicators acted. Of course, Johnson and Johnson's failed crisis communication during the 2008 Motrin scandal is another story. Nevertheless, the organization received praise as, "the goal of public health is to educate the public, control the outbreak of illness and infection, maintain and monitor standards, and inform the public of threats to health and safety" (Olaniran, et al., 2012). The CBC, in this case, absolutely provides the public with an ample amount of information and public threats. However, the main issue with the CBC's method of crisis communication is that it does not provide a solution or a place to turn for those involved in the crisis. As the data suggests, a major secondary narrative is "ambiguity." Because of a significant amount of ambiguity, the CBC does not provide successful public messaging. With the impact of a particular narrative in mind, we must move forward to the discussion of the narratives used by the CBC.

c. Popular Narratives & Unintended Consequences

The primary and underlying focus of this research regards the narrative surrounding the opioid crisis. Because social media are not only challenging the

landscape of communication but also how individuals consume information, the narrative used in crisis communication is incredibly important. If used correctly, crisis communication narratives can avoid potentially catastrophic outcomes. If used incorrectly, crisis communication narratives can result in harm towards a specific group (i.e., social stigma), incorrect information resulting in physical harm, and even the prolonging of the crisis itself. Based on the data collected, the following paragraphs discuss the successes, failures, and possible outcomes of the CBC's narrative usage.

Understanding the narrative used by a news outlet or organization can illuminate true intentions. Returning to Swalve and DeFoster (2016), if an outlet decides to induce a moral panic, they could do so, resulting in tension between a variety of groups (i.e., racial, socioeconomic, and political) (Swalve & DeFoster, 2016). The CBC does not attempt to induce a moral panic to leverage existing misconceptions of certain demographics. In a world rampant with news sources aligning to ends of the political spectrum, it is possible to find several narratives on the same issue. The CBC takes the moral route and objectively focuses on the statistics. At the same time, the "ambiguity" narrative behind each post does not lead the discussion in a productive direction.

The narrative of the opioid crisis is not only important in itself, but also how it fits within the crisis timeline. According to the Gerlach (2016), "news coverage of disease outbreaks has developed into a standard story format involving three general stages: sounding the alarm, mixed messages, and crisis and containment" (Gerlach, 2016). During the Ebola outbreak of 2014, major news outlets fell into this story-telling method. However, when reporting the "crisis and containment" stage, news outlets shifted from containment to aggressive action (i.e., promoting large-scale military missions, the

building of clinics, and the training of local peoples) (Gerlach, 2016). Why, in the case of the opioid crisis, does the CBC remain in a state of inaction?

Where the Ebola outbreak incorporated a “pandemic narrative,” the opioid crisis incorporates a narrative of what can only be described as confusion. As previously discussed, the primary narrative present in posts by the CBC is “information.” At the same time, a large amount of posts with the secondary narrative “ambiguity” are present. Due to this narrative combination, the CBC’s crisis timeline varies between “sounding the alarm” and “mixed messages.” Instead of moving forward in the crisis timeline as one would expect, inaction results in the CBC not pushing the discussion further. This research does not suggest that the CBC is at fault for not pushing the discussion, but due to external forces (i.e., stigma, a lack of understanding, vulnerable populations, etc.), the crisis communication process is incredibly elongated.

Because the timeline is not pushed to the “crisis and containment” stage, the narratives encourage a repetitive trajectory. In other words, the CBC promotes information that “sounds the alarm” on an issue within the opioid discussion. Next, the CBC promotes information that continues the discussion, but does not provide any means to move forward, encourage action or provide an understanding of the issue. As a result, the only way to move forward with the discussion is to “sound the alarm” on another aspect of the crisis (therefore returning back to the beginning of the process). For example, the CBC posted, “Federal health minister orders independent review of opioid guidelines after conflict-of-interest controversy” (CBC News, 2017) [\[5\]](#). This tweet sounds the alarm that a development happened within the crisis. The same day, the CBC posted, “Opioid conflict-of-interest controversy reveals extent of big pharma’s ties to doctors” (CBC News, 2017) [\[7\]](#). This tweet provides a mixed message, as it begins to

question who may be at fault for a portion of the crisis. However, where the next stage would generally turn into “crisis containment,” the CBC does not continue on with the story afterwards. As a result, the conversation never finds resolution.

It is important to remember that if there are no developments in the opioid discussion (i.e., within the conflict-of-interest story, for example), there is no need to continue down the crisis timeline. News outlets should, in theory, report on topics objectively. To remain objective, the outlet should not exploit a situation for the sake of making a story. In the CBC’s case, they do an exemplary job as the primary narrative is not “fear and/or panic” or “sensationalism.” However, by avoiding the progression of the conversation of opioid usage (i.e., following up on a certain story or statistic), the CBC (alongside other news outlets) run the risk of further stigmatizing the issue. Although the primary narrative is not “fear and/or panic” or “sensationalism,” the secondary narrative does contain a decent amount of “ambiguity” and “sensationalism.” As a result, the reader may jump to a conclusion due to the CBC’s strategy to push a specific narrative.

In defense of the CBC’s narrative strategy, they do not directly promote stigma or bias towards a specific group. The CBC is quite objective in promoting statistics that affect all Canadians, regardless of status. However, social media creates the affordance to interact with a large majority of audiences, like those affected by the opioid crisis. Social media also allows the ability to remain anonymous, which protects the vulnerable populations involved. In other words, organizations and news outlets have the ability to help communicate a crisis ethically, inclusively, and systematically. But, the CBC simply does not use the affordances of social media to its full potential. In most healthcare or health-related crises, individuals often characterize (a) the person with the disease as responsible, (b) the disease is incurable, (c) the disease as not well understood, and (d)

that the symptoms cannot be concealed (Boudewyns, Himelboim, Hansen & Southwell, 2015). Because the CBC does not use a narrative that promotes the betterment of those affected by the crisis, the crisis remains stigmatized. The CBC is by no means responsible to reshape or destigmatize the opioid crisis. However, if truly productive dialogue should arise from highlighting the opioid crisis, efforts could exist lead conversation productively and usefully. An overabundance of information posts ensure that the conversation is known to the public. At the same time, this overabundance of information ensures the audience cannot utilize the content provided.

What if an additional narrative classified as “rehabilitation” existed? Posts with these narratives may examine the realities of the opioid crisis and provide a quantifiable solution. Even if the solution is theoretical or in the process of gaining scientific credibility, the post may provide useful information to those who need it most. At this point, the narrative used by the CBC creates the “opi-void” crisis. Again, the mandate of the CBC is not to rehabilitate those affected by the opioid crisis. However, as a news organization, they can absolutely amplify stories about topics that can rehabilitate those affected by the opioid crisis. Instead, narratives surrounding elections, law suits, profit cuts, and crimes remain ever present. Of course, certain posts do exist that warn of the dangers associated with opioids (i.e., mixing with alcohol or other medications). However, the majority of posts do not follow this trend.

d. The Opioid Discussion & Theoretical Frameworks

By now, the multi-faceted nature of the opioid crisis is obvious. The sheer number of stakeholders involved compounded with a non-linear timeline makes the crisis incredibly difficult to understand and communicate. For these reasons, this research must apply an appropriate theoretical lens to fully understand the crisis in question. As

previously mentioned, the Crisis and Emergency Risk Communication (CERC) framework is useful when looking at the opioid discussion from a theoretical lens.

What makes the CERC framework interesting, and different from other classification models of crisis, is that there is a systematic approach to the crisis. Instead of a theory like Situational Crisis Communication Theory (SCCT) that suggests a crisis response should match the level of severity (Coombs, 2004), the CERC framework requires an ongoing communication progress that responds to the different stages of crisis (i.e., pre-crisis, initial event, maintenance, resolution, and evaluation) (Veil, Reynolds, Sellnow & Seeger, 2008). Furthermore, the CERC framework requires the merging of risk and crisis. Instead of simply responding to a crisis, the CERC framework encourages the communication of risk conjointly or before the crisis occurs.

For the opioid crisis, this framework is an incredibly useful tool for analysis. Because the opioid crisis is unique (i.e., different stakeholders and non-linear), both crisis lenses and risk lenses apply. In terms of Veil, Reynolds, Sellnow, and Seeger's (2008) claims, one of the most important aspects of the CERC framework is that "risk messages communicated before a crisis occurs influence perceptions, expectations and behaviours" (Veil, Reynolds, Sellnow & Seeger, 2008). One of the major shortcomings of the CBC's crisis communication strategy is that the information is quite short-sighted. The CBC's posts explain a snapshot of the situation (i.e., results of a study), while not predicting how the crisis will progress. As the CERC framework's fundamental idea surrounds an evolving communication strategy as the problem progresses, the CBC falls short. For example, the CBC posted, "1 in 5 opioid-related deaths in Ontario involve alcohol, study suggests" [\[1\]](#) (CBC News, 2017). The onus is not on the CBC to place blame or direct the conversation a certain way. However, there is no merging of risk and

crisis information. Instead, the CBC could post, “1 in 5 opioid-related deaths in Ontario involve alcohol, study suggests. If using prescription medication, avoid alcohol consumption, as liver damage is increased.” Of course, this suggestion is quite rudimentary. However, combining both risk and crisis makes the information manageable and useful to the public.

An additional aspect of the CERC framework involves “acknowledging the wide variety of publics with variable needs, interests, and resources” (Veil, Reynolds, Sellnow & Seeger, 2008). Again, the opioid crisis is an interesting case study for this framework, as a large amount of the public may not exist online, while also belonging vulnerable groups. Analyzing the opioid crisis in this manner highlights the importance of narrative usage by the CBC. If the CERC framework establishes the understanding that risk levels are uneven across diverse populations (Veil, Reynolds, Sellnow & Seeger, 2008), the communication efforts should mimic this reality. The CBC tends to create content for their audience, not the affected audiences. A large majority of their tweets outline the difficulties, risks, and realities associated with opioid usage. However, their narrative tends to favour their own audience. Because this research is limited, it cannot determine the CBC’s core Twitter audience (in terms of age, demographic, race, gender, etc.). Regardless of the available data, the CBC could publish content that is of use to the affected demographics (i.e., where safe injection sites are, which medications do not mix, etc.). Because of the cooperative and communal nature of social media, those affected may learn the risks associated with opioid usage if shared by someone within the CBC’s audience (even if the affected party is outside of the CBC’s audience).

x. Conclusion

In conclusion, the opioid crisis lacks significant discussion by the CBC. While the news outlet does a commendable job by promoting information that illuminates the realities of the crisis (i.e., statistics), the CBC does not provide adequate information with (a) what to do with the information and (b) how to feel about the information. Each individual post has a primary narrative, while many posts have a secondary narrative. Whether the CBC intended an individual post to use a particular narrative is beyond this research. However, the data suggests that an overwhelming “information” focused narrative, with a majority of secondary narratives contain an “ambiguity” or “political” narrative. The use of these narratives have implications for the larger discussion.

The CBC most definitely frames the issue of opioid crisis. The posts are framed in a specific way with the intention to inform to public, which is not abnormal for news outlets during a crisis. At the same time, we see a varied response to the narratives by the public. Future research could conduct a study as to why the CBC’s audience responds (i.e., likes, comments, and retweets) to a certain narrative. In the meantime, this research can conclude that audiences respond (i.e., comment) to political content, while sharing sad or sympathetic content. By understanding the reality that certain narratives yield a certain response, which the CBC would most definitely understand, the overall narrative runs the risk of manipulation towards a certain end goal.

In terms of the information conveyed, as this narrative is most prevalent, the CBC may intend for the audience to be informed with current affairs surrounding the opioid crisis. A primary area that the CBC falls short is how the information helps the audience (whether they are involved with the opioid crisis). It is useful to conclude that the CBC’s primary narrative is “information.” However, additional research must examine the usefulness of the information. Whether the CBC provides statistics, news stories of

arrests or large financial figures, there must be an increased effort to utilize this information meaningfully.

Finally, the CBC does promote content surrounding the opioid crisis quite regularly. As previously mentioned, there are a few outliers that increase the discussion, which involve political events, legal developments, or research studies. But, generally speaking, the crisis communication surrounding the opioid crisis is quite even. Normally, communicating the crisis regularly would benefit the overall discussion. By posting about the crisis around the same amount each month, the visibility of the issue is around the same year-round. Moving forward, the CBC could post more content each month to ensure that the regular content increases visibility year-round. Additional studies could illuminate the amount of crisis-related tweets for another issue compared to this crisis. It does seem, however, that this conversation does not warrant as much discussion as a more seemingly imminent crisis (i.e., disease, illness or outbreak).

But, at the end of the discussion, we must acknowledge that social media are only one part of the crisis communication process. Especially when understanding how the CBC communicates crisis, 280 characters cannot fully represent the entire conversation. Attached to each tweet are articles written by incredibly talented journalists and videos that encompass much more than a single tweet. Furthermore, larger discussions occur on other media (i.e., television, podcasts, YouTube, newspapers, etc.). These additional mediums allow for a larger discussion. However, when audiences are increasingly turning to social media for their main source of news, what is said in 280 characters can represent an entire crisis. Without acknowledging this reality, narratives will continue to speak larger than the tweet itself. The narrative will also underpin the entire conversation, lasting longer than the duration of the tweet in any single newsfeed.

i. Appendices

Appendix A. Data Category Definitions

Category	Definition
Keyword	A total of 17 search terms were included in this research. (1) Opioid, (2) Fentanyl, (3) Naloxone, (4) Morphine, (5) Hydrocodone, (6) Oxycodone, (7) Analgesic, (8) OxyContin, (9) Heroin, (10) Methadone, (11) Buprenorphine, (12) Thebaine, (13) Hydromorphone, (14) Pethidine, (15) Levorphanol, (16) Tramadol, and (17) Dextropropoxyphene.
Tweet Text	The complete text included in an individual tweet was copy and pasted into this section.
Date Posted	Refers to the date posted of the tweet.
Narrative	The analyzed and categorized narrative decided—a primary focus of this research.
Secondary Narrative	The analyzed and categorized secondary narrative decided—a primary focus of this research. Certain tweets did not warrant a completely singular narrative.
Narrative Keywords	The decision behind a certain narrative choice.
Secondary Narrative Keywords	The decision behind a certain secondary narrative choice.
Crisis Acknowledgement	Whether or not the tweet in question involved the terms crisis, problem, epidemic, issue, catastrophe, disaster, and emergency.
Tweet Type	Whether the tweet was an article, singular photo or video.
Comments	The number of comments associated with the tweet in question.
Retweets	The number of retweets associated with the tweet in question.

Likes	The number of likes associated with the tweet in question.
Photo Inclusion	Whether or not the CBC included a photo alongside the tweet.
Photo Narrative	The analyzed and categorized narrative of the associated photo.

Appendix B. Crisis and Crisis-Related Term Count

Term	Count
Crisis	27
Emergency	4
Problem	2
Epidemic	1
Dilemma	0
Disaster	0

Appendix C. Top “Comment” Results

Keyword	Tweet	Narrative	Comments
Opioid & Heroin	Liberals say they'll back prescription heroin, drug checking services to fight opioid crisis	Political	61
Opioid	Trump to unveil opioid plan that includes death penalty for drug dealers: White House	Political	55
Opioid	WATCH Trump unveil opioid crackdown plan LIVE	Political	41
Opioid	NDP pushes Liberals to follow Trump, declare opioid crisis a national public health emergency	Political	40
Opioid & OxyContin	OxyContin manufacturer, Purdue Pharma, says it will no longer market opioid drugs to doctors	Information	38

Appendix D. Top “Retweet” Results

Keyword	Tweet	Narrative	Retweets
Fentanyl	Calgary mother hopes photo of dying son will deter others from doing fentanyl	Sympathy	140
Opioid	U.S. drug company founder charged with bribing doctors to prescribe addictive opioid	Sensationalism	108

Opioid	At least 2,458 Canadians died from opioid-related overdoses in 2016: report	Sensationalism	78
Opioid & OxyContin	OxyContin manufacturer, Purdue Pharma, says it will no longer market opioid drugs to doctors	Information	72
Fentanyl	OPINION: Comparing marijuana to fentanyl is social conservatism without a clue: Robyn Urback	Information	72

Appendix E. Top “Likes” Results

Keyword	Tweet	Narrative	Likes
Fentanyl	OPINION: Comparing marijuana to fentanyl is social conservatism without a clue: Robyn Urback	Information	185
Opioid & OxyContin	OxyContin manufacturer, Purdue Pharma, says it will no longer market opioid drugs to doctors	Information	176
Fentanyl	Calgary mother hopes photo of dying son will deter others from doing fentanyl	Sympathy	119
Hydromorphone & Fentanyl	A pharmacist who stole 3,000 fentanyl and 1,500 hydromorphone patches has been sent to prison for 10 years	Information	95
Fentanyl	Canadian record of 130,000 fentanyl pills seized by Edmonton police	Sensationalism	90

Appendix F. Embedded Image Results

Category	Subcategory	Subtotal	Total
Person	Adult	20	32
	Celebrity	2	
	Children	3	
	Homeless	2	
	Person with Information	2	
	Non-Descript Person	2	
	Baby	1	
Drug	Non-Descript Drug	15	17
	Real Drug Photo	2	

Prescription Drug	-	17	17
Drug User	-	13	13
Political	Political Figure Donald Trump	9 4	13
Miscellaneous	Art Alcohol Animal Guns Holiday (Christmas) Card Game Company Food Money Sign	2 1 1 1 1 1 1 1 1 1	11
Authority Figure	-	6	6
N/A	-	4	4
Information	-	2	2
Death	-	1	1

Appendix G. CBC Tweets

- [\[1\]](#) CBC News: “1 in 5 opioid-related deaths in Ontario involve alcohol, study suggests.” *Twitter*, August 31, 2017, 12:45 PM
- [\[2\]](#) CBC News: “2000% rise in street drug samples testing positive for fentanyl.” *Twitter*, November 9, 2017, 7:01 PM
- [\[3\]](#) CBC News: “As opioid overdoses spike, Ottawa health workers try giving addicts ‘clean drugs.’” *Twitter*, October 27, 2017, 12:00 AM
- [\[4\]](#) CBC News: “It will soon be easier for Canadian doctors to prescribe methadone and (pharmaceutical-grade) heroin.” *Twitter*, March 27, 2017, 4:20 AM
- [\[5\]](#) CBC News: “Federal health minister orders independent review of opioid guidelines after conflict-of-interest controversy.” *Twitter*, May 19, 2017, 3:00 AM
- [\[6\]](#) CBC News: “NDP pushes Liberals to follow Trump, declare opioid crisis a national public health emergency.” *Twitter*, October 27, 2017, 10:45 AM
- [\[7\]](#) CBC News: “Opioid conflict-of-interest controversy reveals extent of big pharma’s ties to doctors.” *Twitter*, May 19, 2017, 7:15 AM
- [\[8\]](#) CBC News: “The number of babies born with an opioid dependency is rising.” *Twitter*, October 20, 2017, 2:30 PM

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