

# A Media Analysis of Theme 3 of the Healthy Kids Community Challenge: “Choose to Boost Veggies and Fruit”

Exploring engagement with an online social marketing campaign



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# Introduction

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As part of Public Health Ontario (PHO)'s provincial evaluation of the Healthy Kids Community Challenge (HKCC), we conducted a media analysis to measure potential exposure to, and engagement with, the HKCC campaign and its third theme, "Choose to Boost Veggies and Fruit."

## Background

Over the last decade, there has been an increase in the use of social media and social marketing in health promotion and public health settings.<sup>1</sup> As a health promotion tool, social media has the potential to drive changes in health behaviours by increasing knowledge or awareness of health information on a wide scale.<sup>1</sup> The Healthy Kids Community Challenge (HKCC), a Ministry of Health and Long-Term Care (MOHLTC) health promotion program, provided 45 communities across Ontario with funding, resources and social marketing tools to promote healthy behaviours among children 0 through 12 years of age (program ran September 2015 to September 2018).<sup>2</sup> As a part of the HKCC, communities were encouraged to promote healthy behaviours through initiatives (programs, changes to supportive environments, policies) using social media. The HKCC benefits children and families in participating communities by providing support for health behaviours related to physical activity and healthy eating.<sup>2</sup> The first two HKCC themes promoted increased physical activity ("Run. Jump. Play. Every Day!") and increased water consumption/reduced sugar-sweetened beverage consumption ("Water Does Wonders!").<sup>2</sup> This report presents an analysis of media content from the third (of four) HKCC themes, "Choose to Boost Veggies and Fruit," which was designed to encourage children and families to adopt healthier eating behaviours by including more vegetables and fruit in their diet.<sup>2</sup>

## The EPODE Approach

The HKCC is modeled after the Ensemble Prevenons l'Obesite Des Enfants (EPODE) [Together Let's Prevent Childhood Obesity] methodology for the effective and sustainable prevention of childhood obesity. EPODE uses a capacity-building approach to facilitate changes to health behaviours through coordinated societal processes that engage local stakeholders to change local environments, family norms and other childhood settings.<sup>3</sup> There are four pillars to EPODE: (1) political commitment, (2) resources, (3) support services and (4) evidence, all of which are organized by a central coordinating team.<sup>3</sup> For the HKCC, the central coordinating stakeholder was the MOHLTC, who provided funding, coordination, social marketing resources and support to the participating communities.

The HKCC, similar to other programs modeled after EPODE, involved Local Project Managers (LPM) and a Local Steering Committee (LSC). An LPM was hired in each HKCC community to coordinate, plan and lead the initiative at the community level. LPMs had 10 key responsibilities outlined by the MOHLTC, one of which was to bring together the LSC. The LSC was involved in the planning and implementation of program activities, managing partnerships and providing support for evaluation and data collection. To

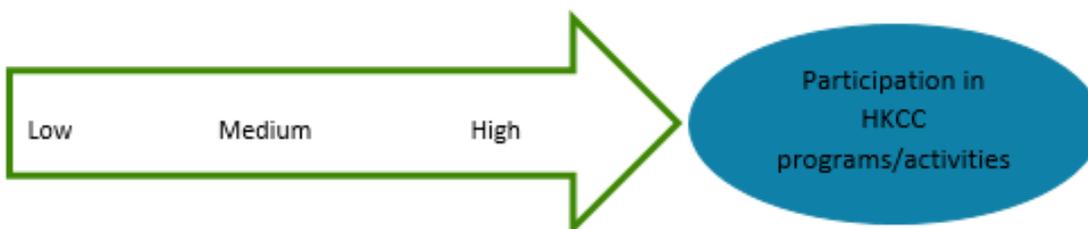
document their progress throughout the HKCC, LPMs (with the support of their LSC) submitted theme-based action plans and project activity reports to the MOHLTC. The theme-based action plans provided information on the activities the community hoped to initiate throughout each theme and the project activity reports provided information on implementation of each theme-based initiative.

## Media Content Analysis

Given the increased availability and use of social media, there is a growing interest in developing standards for measuring and evaluating social media as it relates to health promotion.<sup>1</sup> Conducting a media content analysis can help to understand the ways in which media might increase awareness of, and interaction with, public health interventions.<sup>4</sup> In particular, analyzing the content of messages and the engagement or interaction that users have with messages can help us understand the extent to which social media contributes to health promotion programs. Our analysis is informed by an evaluation model, developed to evaluate social media engagement in health promotion settings.<sup>5</sup> The model contains key performance indicators for low, medium and high levels of social media engagement, with an overall outcome of actual involvement or participation in the health promotion program or change to the targeted behaviour of interest ([Figure 1](#)).<sup>1,5</sup> According to this model:

- Low engagement is characterized by passive interaction in which one-way messaging provides information to the audience (e.g., a tweet with no retweet or like).
- Medium engagement is characterized by two-way interaction, indicated by the presence of audience engagement (e.g., replies, likes and retweets).
- High engagement is characterized by two-way interaction, original photo and video content and messages directly asking for engagement from the audience.<sup>1</sup>

**Figure 1. Model for evaluating social media engagement in the Healthy Kids Community Challenge (adapted from Neiger et al., 2013)**



It is important to note that the use of social media in health promotion settings is not meant or expected to be a substitute for complex behaviour change programs. Rather, social media can increase audience engagement with an existing program and augment program reach.<sup>5</sup> Measuring audience engagement using virality metrics can indicate the impact of a social media message.<sup>6</sup> Virality metrics for Twitter include the number of followers, number of retweets and number of likes. All of these capture some dimension of users' interaction with social media content.<sup>6</sup> Twitter and other social media

platforms have unique terminology to refer to their features and functions, some of which are included and defined in [Appendix A](#).

Twitter users' interactions with tweets can also be an indication of agreement or approval with the messaging, signalling the extent of social endorsement and possibly affecting information processing and decision making of other users.<sup>7</sup> Previous studies indicate that the audiences of social media accounts with a higher number of followers and more engagement with content (i.e., through retweets, likes, and shares) are more likely to consider changing their behaviours to meet recommendations/information disseminated by that account.<sup>6,7</sup>

Communities participating in the HKCC used social media as a way to promote programming and disseminate health information. Given this key component of the program, it is important to identify how social media was used by those implementing HKCC programming and examine the level of engagement with HKCC messages on social media. By measuring the level of engagement with Twitter accounts that published HKCC messages, we will provide some understanding of engagement in and potential reach of the HKCC program.

## Objectives

The purpose of this report is to analyze the use of social media during Theme 3 of the HKCC by focusing on Twitter and the level of engagement with the content produced by HKCC communities.

Specifically, this study:

1. Refines previously developed HKCC media analysis protocols (from [Theme 1](#) and [Theme 2](#)) to explore the media messaging related to HKCC Theme 3 (“Choose to Boost Veggies and Fruit”) and the distribution of messages across HKCC communities.
2. Explores the use of virality metrics and an evaluation model to observe changes in the content and engagement with HKCC media messaging.
3. Explores the utility of an NVivo add-on feature - NCapture - for collecting and analyzing online media content related to the HKCC and Theme 3.

# Methods

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A preliminary search was conducted to identify HKCC community social media accounts, including Facebook, Twitter, Instagram and YouTube. HKCC social media accounts were identified through a Google search between May 7 and May 11, 2018; all pages were recorded in a database. Between May 18 and June 11, 2018, Twitter messages were identified and collected using NCapture, an NVivo web extension. All relevant messages were coded in NVivo. This report focuses specifically on Twitter content since Facebook, Instagram and YouTube did not have a mechanism for searching historical content. Twitter's advanced search function allowed for specific terms, hashtags and accounts to be searched within a specific time period. See [Appendix B](#) for the search strategy used to collect data from Twitter.

A mixed methods approach was used to measure potential exposure and engagement with HKCC and Theme 3 messaging. NVivo is a mixed methods software with features designed to facilitate the collection and analysis of social media and other online content. Twitter content that was posted between April 30 and December 31, 2017 was obtained for analysis. These dates correspond to the submission dates of communities' theme-based action plans and project activity reports for Theme 3.

The search strategy was refined from those used in HKCC Themes 1 and 2 media analyses and from a preliminary review of relevant tweets published during the time period of interest.<sup>8,9</sup> For all three media analyses, the search strategies included key terms and hashtags to identify tweets related to the HKCC and the specific theme of interest ([Appendix B](#)). A set of inclusion and exclusion criteria were used to refine the database ([Table 1](#)). Since tweets have a specified character allowance (140 characters at the time the collected tweets were published), search terms were included to identify tweets that were published using shorter variations of the theme-based Twitter hashtag for HKCC Theme 3 (i.e., #ChooseToBoost). An analysis was conducted on the final yield of 396 tweets.

A search was also conducted in YouTube ([Appendix B](#)) to identify original video content published by HKCC Communities. The same inclusion and exclusion criteria used for the Twitter search ([Table 1](#)) were applied to the results of the search within YouTube.

**Table 1. Inclusion and exclusion criteria for HKCC Theme 3 Twitter search**

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> <li>English or French language tweet</li> <li>Tweet is publicly available (i.e., a user did not need to follow them or have a Twitter account to see the tweet).</li> <li>Tweet must have been published between April 30, 2017 and December 31, 2017 (to correspond with the Theme dates).</li> <li>Tweet must have been related to and/or mentioned the Healthy Kids Community Challenge and/or the third theme “Choose to boost veggies and fruit.”</li> </ul>	<ul style="list-style-type: none"> <li>Tweets in languages other than English or French.</li> <li>Tweets that mention HKCC Theme 1, 2 or 4 and do not mention Theme 3.</li> <li>Tweets published before April 30, 2017 or after December 31, 2017.</li> <li>Duplicate tweets, identified through different search terms or posted on the same day.</li> <li>Advertisements (pop-up ads on accounts)</li> <li>Tweets that contain search terms, but are not related to the HKCC or to Theme 3.</li> </ul>

## Coding Strategy

NVivo was used to organize the collected tweets into different content categories and sub-categories ([Table 2](#)). Definitions were also developed to accurately assign the content of tweets within the strategy. The definitions of the tweet content sub-categories can be found in [Table 3](#).

**Table 2. Twitter content categories and sub-categories**

Content Categories	Content Sub-Categories
Publisher of the Tweet (Twitter account/source)	HKCC Community
	MOHLTC
	Municipality
	Public Health Unit
	Members of the Public
	News/Media Outlet
	Political Figure
	Community Health Centre/Aboriginal Health Access Centre
	External Organizations [1]
School/University	

Content Categories	Content Sub-Categories
	Teacher/ Professor Library
Tweet content (purpose of information presented)	Community Partnerships Directly Addressing Audience HKCC Campaign Awareness Event Advertising Event Coverage Healthy Eating Promotion of engagement with or use of social media (Refer to Table 4 to view detailed definitions of all content categories.)
Presence of HKCC Theme 3	Tweet included information on or mentioned Theme 3, “Choose To Boost Veggies and Fruit.”
Theme integration	Tweets that integrate two or more HKCC themes (i.e., Mention Theme 3, as well as Theme 1 “Run, Jump, Play, Everyday!” or Theme 2 “Water Does Wonders”)
Month published	The month the tweet was published.
HKCC community	The HKCC community the tweet publisher is based in.
Hashtags	Hashtags present in the tweet.
Followers	Number of followers of the tweet publisher’s account
Engagement	Retweets (#) Retweeted By – who retweets the original tweet Likes (#) Liked By – who likes the tweet the original tweet Mention – who mentions the original tweet on their own Twitter page Replies (#) Replied to By – who replies to the original tweet Quoted Tweet – who quotes the tweet Poll
Attachments	Photos [2]

Content Categories	Content Sub-Categories
	Link [3] Gif

[1] **External Organizations:** Non-Profit or Charity, Education, Food, Health, Sport and Recreation, Other  
 [2] **Photos:** Event coverage, Event poster or advertisement, Fruits and/or vegetables, Gardening, Generic HKCC image, Health awareness, Children, Children preparing food, Families eating, Local campaign, Recipe, Sport team  
 [3] **Links:** Article, Facebook, Government, HKCC Website, Instagram, Ministry, Municipality, Public Health Unit, Recipe, YouTube, Other

**Table 3. Definitions of Tweet content subcategories**

Tweet Content Subcategories	Definition of tweet content subcategories
Community partnerships	Tweets acknowledging a community partnership related to the HKCC as a campaign or HKCC programming.
Directly addressing the audience	Asking a question or requesting for community feedback regarding HKCC, HKCC programming or the consumption of fruits and vegetables.
Event advertisement	Promoting an HKCC event, an event were HKCC communities will be present (e.g., sports events, festivals) or participation in an HKCC contest (e.g., photo contests).
Event coverage	Reviewing details, successes and stories from HKCC related events or providing live updates of events while they are occurring.
HKCC campaign awareness	Broad promotion of the HKCC in general, as a campaign/program. Theme 1 Theme 2 Theme 3 Theme 4 General, no Theme
Promotion of healthy eating	Tweets supporting the consumption of fruits and/or vegetables using a variety of approaches: Providing Fruit and/or Vegetable Knowledge (e.g., where to purchase,

Tweet Content Subcategories	Definition of tweet content subcategories
	harvest season, etc.) Health Benefits of Consuming Fruits and/or Vegetables Incentives (e.g., provision of free fruits and/or vegetables, prizes for children who order fruits and/or vegetables at a local restaurant) Fruit and/or Vegetable-Based Recipes Strategies and Tips for Consuming Fruits and/or Vegetables
Promote social media Engagement	Promoting engagement with Twitter, Facebook, YouTube or other social media outlets (i.e., asking the audience to retweet, visit a Facebook page, watch a YouTube video, etc.).

## Analysis

The data were initially organized according to publisher, content, date, engagement and for the presence of attachments. The subsequent analysis of these tweets included basic quantitative descriptive statistics (frequencies of the different tweet content types items, means, minimum, maximum, standard deviation), as well as qualitative (meaning of and engagement with tweets). Analyses were conducted using NVivo and Microsoft Excel 2010.

# Results

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While there were 45 communities participating in the HKCC, the number of communities included in this analysis totaled to 46. Four participating communities were within the larger City of Toronto, each of which created an HKCC Twitter account specific to their community; however, due to the involvement of local Toronto organizations throughout the HKCC, it was often difficult to discern which Toronto community the tweet was attributed to. As a result, *City of Toronto – unspecified* was analyzed separately.

## HKCC Social Media Pages

Thirty-one HKCC communities had Facebook pages and 26 communities had Twitter accounts, an increase from the 28 Facebook and 23 Twitter HKCC community-specific accounts identified during Theme 2. Twelve community YouTube accounts and nine community Instagram accounts were also identified. [Appendix C](#) includes a comprehensive list of Facebook, Twitter, YouTube and Instagram accounts attributed to HKCC communities.

## Twitter Analysis

### Number of Twitter Messages

The Twitter search yielded a total of 396 tweets that met the inclusion criteria, with an average of 8.4 tweets per community (n=46). The standard deviation (11.8) and range (0-64) indicate that there was substantial variation in community tweeting practices ([Table 4](#); [Figure 2](#)). Across Theme 3 of the HKCC (April 30 to December 31, 2017), higher frequencies of tweets were published in October (16.0%), November (15.9%) and May (13.3%). This is consistent with Theme 2 (June 2016 to April 2017), where the highest number of tweets was recorded in October and the fewest in April. It is possible that across Themes 2 and 3, October and November had the highest proportion of tweets to offset the consumption of confectionary products during Halloween with messaging about increasing the consumption of water (Theme 2), and fruits and vegetables (Theme 3).

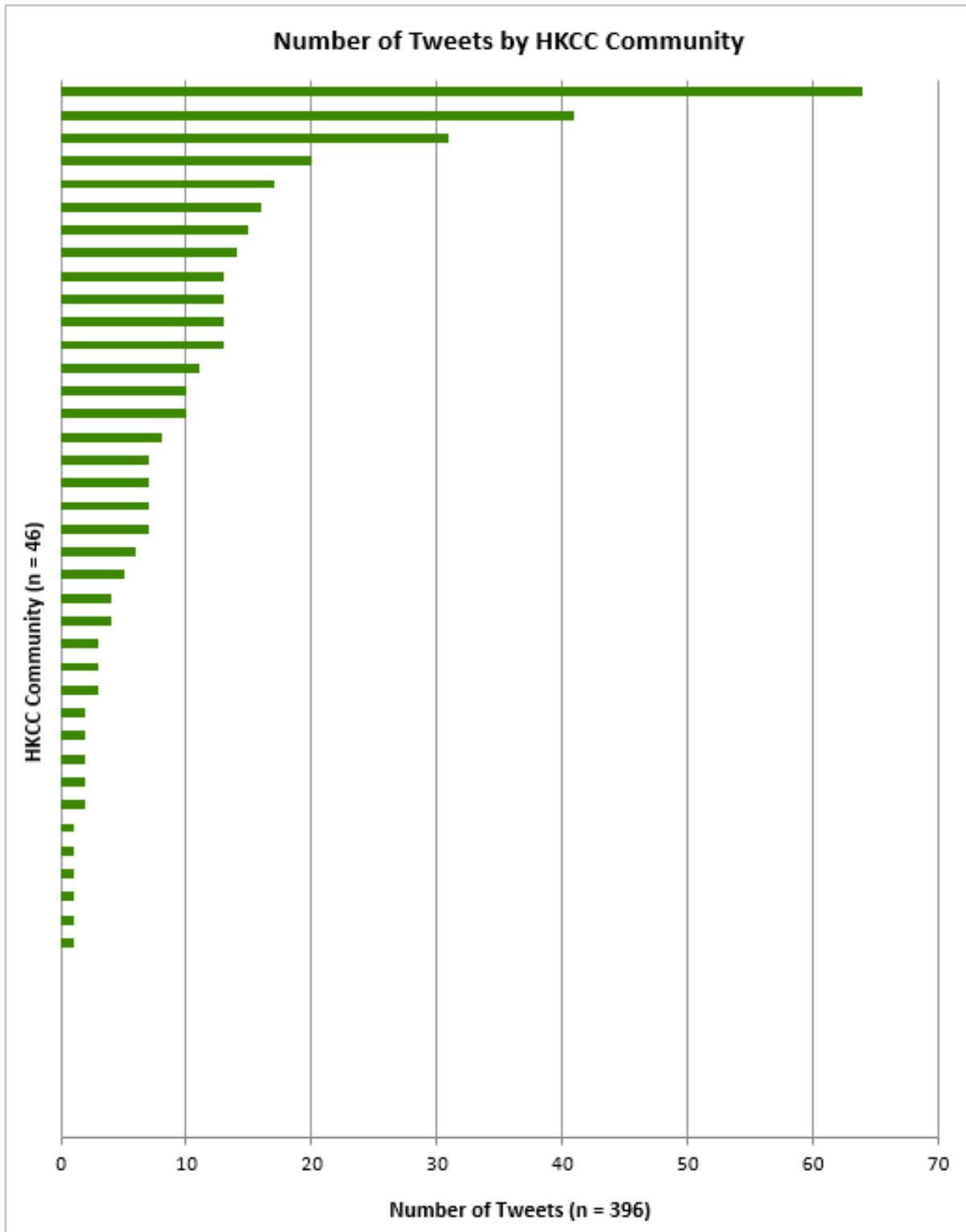
**Table 4. Descriptive statistics of tweets (n = 396)**

Descriptive Statistic	Value
Minimum	0
Maximum	64
Mean	8.4
Median	4
Standard deviation	11.8

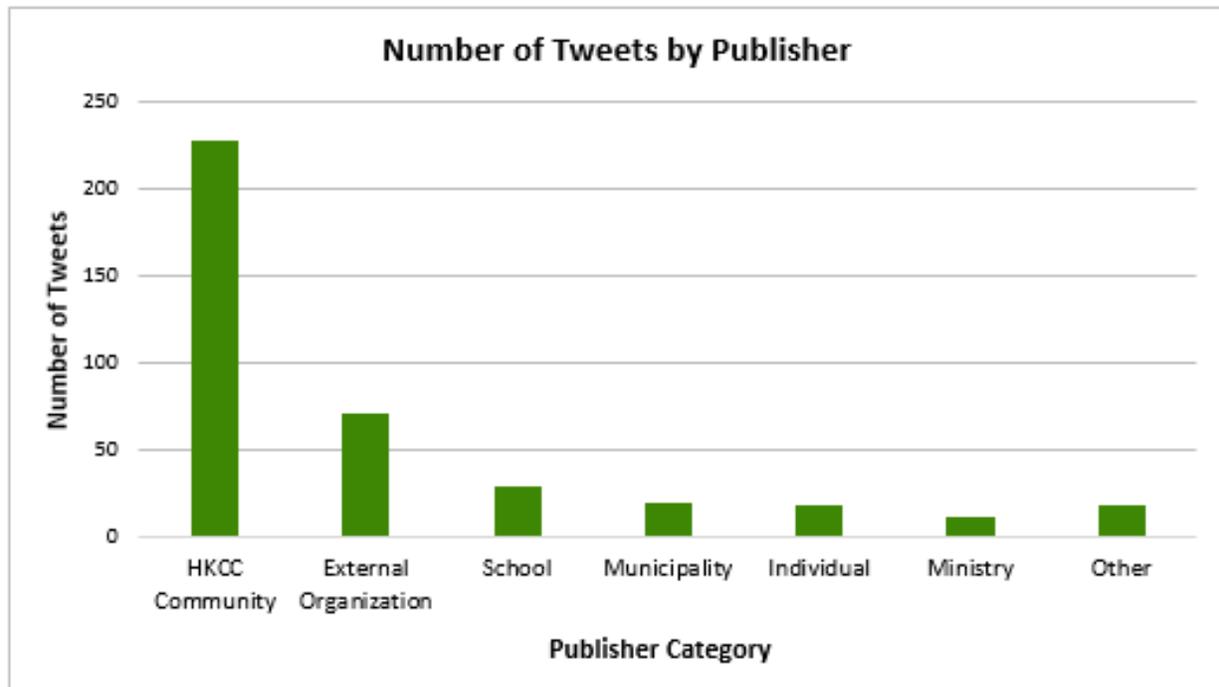
## Publishers

Publisher categories were established to explore the diversity of accounts and sources on Twitter that publish tweets about the HKCC. HKCC community Twitter accounts were the ones that published the most tweets (57.5%) (Figure 3), consistent with both Themes 1 (57.0%) and 2 (61.4%). The remaining Theme 3 tweets were published by external organizations (17.9%), schools (7.3%), local municipalities (5.0%), members of the public (4.5%) and the Ministry of Health and Long-Term Care (3.0%). Tweets from the “other” category (4.5%) were published by Community Health Centres or Aboriginal Health Access Centres, Public Health Units (PHUs), Political Figures and Libraries. While the PHUs and local municipalities appeared to publish a lower proportion of tweets, we recognize that in many cases the primary source for HKCC-related messaging came from a dedicated Twitter account (versus “piggy-backing” on PHU or municipality’s accounts).

Figure 2. Number of tweets by HKCC community, excluding those that could not be assigned to an HKCC community (n=46)



**Figure 3. Number of tweets by publisher (n=396)**



## Content of Tweets

There was variability in the content of the collected tweets ([Figure 4](#)). A single tweet's content could have been assigned to more than one content category in NVivo, suggesting that the message contained different types of content (e.g., a message might promote healthy eating and also advertise an upcoming event). From the 396 tweets collected, 98 tweets contained content representative of more than one content category, amounting to a total of 494 counts for Twitter message content. Tweets with message content promoting healthy eating (27.9%) were most common throughout Theme 3. Other content commonly identified across the tweets included HKCC campaign awareness (22.2%), event coverage (20.4%) and promotion of social media engagement (9.9%). See [Table 5](#) for examples of tweets and the content categories to which they were assigned.

The most frequently published Twitter content during Theme 3 differed from that of Theme 2, in which HKCC campaign awareness (33.5%) was the most frequent, followed by promotion of the targeted behaviour (water consumption) (24.5%). In Theme 3, there was a higher proportion of tweets with content encouraging the targeted health behaviour (consumption of fruits and vegetables); however, interpretation of this difference requires some caution, since each tweet analyzed for Theme 2 was assigned to only one content category.

Figure 4. Content of tweets (n=494)

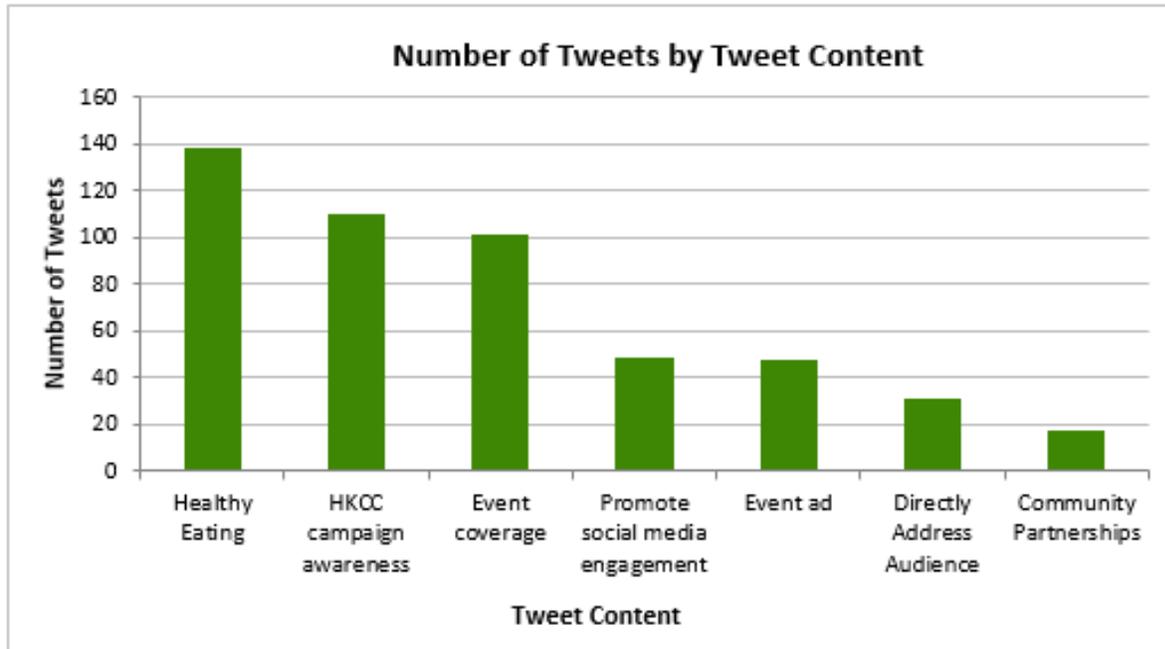


Table 5. Tweet content and corresponding content category

Content category	Example Tweet	Details
Community partnerships	@TheNWHU (15 May 2017) Choose to boost veggies & fruit! Partner w/ us & access funding to help kids & families make healthy choices: <a href="http://ow.ly/3hcy30bDZZS">http://ow.ly/3hcy30bDZZS</a> #HKCC	Invitation to partner on Northwest Strong HKCC with a link to the guidelines for a proposed partnership.
Directly address the audience	@HealthyKidsHD (27 Nov 2017) What are some of your fav fruits and veggies from around the world? Let us know! #ChooseToBoost #VeggiesAndFruit #HealthyKids #HealthyKidsCommunityChallenge	An example of a cross-coded tweet as it both Directly Addresses the Audience and Promotes further social media engagement in the form of requesting a reply to the tweet.  This tweet also serves as an example of the adaptation of Theme 3 messaging through the creation of new hashtags (e.g., #ChooseToBoost), which would have been identified by the

Content category	Example Tweet	Details
		additional search strategy.
Event advertising	<p>@bbbPtbo (30 Nov 2017)            Enjoy a delicious meal in the #ptbo community &amp; learn how Healthy Kids Community Challenge Peterborough @HKCCPtbo has been helping kids eat more veggies and fruit. Thurs. Dec.7th at Peterborough Public Health. Nourish Project will be in charge of the dinner.</p>	This is an event advertisement example tweet, containing information about an event prior to the occurrence of the event itself.
Event coverage	<p>@growingtogethr (19 Dec 2017)            Club V &amp; F had its 1st child training session so they can prepare future salad bars for themselves &amp; other extended hour night program children! "Funded by the Province of Ontario as part of the Healthy Kids Community Challenge" @superkidsck @ChildcareCK @CKPublicHealth</p>	This is an example of an event coverage tweet, containing information about an event after the event has occurred.
HKCC campaign awareness	<p>@VisitBrantford (11 Dec 2017) "Choose to Boost Veggies and Fruit" is the latest initiative of the Healthy Kids Community Challenge to promote healthy eating, physical activity and healthy lifestyle choices for children.</p>	This tweet is an example of Theme 3 HKCC Campaign Awareness.
Promotion of social media engagement	<p>@HealthyKidsHD (5 Sep 2017)            #ChooseToBoost with this Mixed Veggie Soup Recipe! Serves 4 Prep time: 20 minutes Total time:  <a href="https://www.instagram.com/p/BYqpjYRFWM4/">https://www.instagram.com/p/BYqpjYRFWM4/</a></p>	<p>This tweet is trying to promote further social media engagement by providing a link to an Instagram post, which is another social media platform utilized by HKCC Communities.</p> <p>This tweet would have also been coded under Promotion of Healthy Eating, as it contains a recipe. A recipe is an example of virtual Promotion of Healthy Eating, as this promotes the preparation and consumption</p>

Content category	Example Tweet	Details
Promotion of healthy eating	<p>@NRPUBLICHEALTH 20 Sep 2017            Add a veggie or fruit to each meal &amp; snack – an easy way to get your #5aday! Unsure how to prepare? Check out @ProduceSimple #ChoosetoBoost</p>	<p>of healthy foods.</p> <p>This tweet was identified as using strategies and tips to promote healthy eating. The tweet provides tips on how to prepare fruits and vegetables in order to meet the five servings per day recommendation.</p> <p>This tweet also encourages social media engagement as the audience is invited to check out another Twitter page for more information.</p>

### Engagement

Social media engagement was analyzed by applying the engagement model (Figure 1) to the virality metrics of the collected tweets. Virality metrics can be described as data (e.g., number of retweets or likes) used to gauge the impact of social media activity. Low level engagement is characterized by one-way messages that are not compelling enough to elicit engagement via a retweet or like.<sup>2</sup> Medium level of social media engagement is characterized by messages that are compelling enough to elicit engagement from the audience, in this case in the form of retweets, likes and replies.<sup>2</sup> For Theme 3, a total of 290 tweets were retweeted at least once (73.2% of total sample of tweets) and 349 tweets were liked at least once (92.9% of total sample of tweets) (Table 6). In contrast, only 50.2% of tweets were retweeted at least once and 62.5% were liked at least once in Theme 2. Using these virality metrics as indicators of engagement, it appears there was an increase in engagement in Theme 3, compared to Theme 2.

External organizations were most active in terms of both retweeting and liking Theme 3 tweets. Furthermore, while HKCC communities retweeted and liked each other’s tweets, tweets published by HKCC communities were more frequently retweeted by external organizations and individuals with publicly accessible Twitter accounts. As previously noted, some tweets (12.4%) included prompts for the audience to engage further. These tweets encouraged engagement from the audience by explicitly inviting them to retweet or like the tweet in order to express agreement or requesting a reply to a question within the tweet.

### Exposure to Secondary Audience

On Twitter, a secondary audience refers to individuals who can view a tweet published by an account that they do not follow. When an individual retweets or likes a tweet, it will appear on their own Twitter

profile and will be shown to their followers, who may or may not follow the original content publisher. This creates an opportunity for a secondary audience to be exposed to the message.

The tweets published across Theme 3 were more often liked (92.9%) than retweeted (73.2%). A high proportion of tweets published by PHUs, news/media, political figures and libraries were retweeted or liked; however, there were overall fewer tweets published by these accounts. While the proportion of retweets and likes is high for these publishers, the tweets published by HKCC communities, municipalities, external organizations (e.g., non-profits) and schools likely had higher exposure to secondary audiences. Exposure is more likely for these publishers, as they had a larger number of tweets, over 70% of which were retweeted or liked.

Certain types of tweet content appeared to be retweeted and liked more than others, increasing its potential to be exposed to secondary audiences. Tweets promoting healthy eating and community partnerships were retweeted more than any other type of content, while tweets about community partnerships and event advertising were liked more than any other type of tweet content. Therefore, these tweets were more likely to be seen by secondary audiences since retweets and likes increase the visibility of a tweet beyond the followers of the original poster.

**Table 6. Engagement with Tweets across HKCC Theme 3**

<b>Publisher of the Tweet</b>	<b>Total number of Tweets</b>	<b>Number of retweeted Tweets</b>	<b>% of Tweets retweeted</b>	<b>Number of liked Tweets</b>	<b>% of Tweets liked</b>
HKCC Community	228	172	75.4	202	88.5
Municipality	20	14	70.0	18	90.0
Individual	18	7	38.8	14	77.7
External Organization	71	52	73.2	60	84.5
Public Health Unit	5	5	100.0	5	100.0
School	29	21	72.4	27	93.1
News/Media Source	4	4	100.0	4	100.0
Political Figure	2	2	100.0	2	100.0
CHC/AHAC	4	0	0.0	1	25.0
Library	3	3	100.0	3	100.0

Publisher of the Tweet	Total number of Tweets	Number of retweeted Tweets	% of Tweets retweeted	Number of liked Tweets	% of Tweets liked
MOHLTC	12	11	91.6	11	91.6
<b>Total</b>	<b>396</b>	<b>290</b>	<b>73.2</b>	<b>368</b>	<b>92.9</b>

## Photo and Video Content

One key indicator of high social media engagement is the inclusion of original photo or video content in social media messaging.<sup>2</sup> Any photos attached to Tweets were considered in the NVivo coding strategy to account for this. YouTube was also used to identify original video content published by HKCC Communities throughout Theme 3, but these videos were not included in the content coding. Photo and video content were not collected in the Theme 1 and 2 media analyses, so results cannot be compared across themes.

### Photos as Twitter Message Attachments

According to the engagement model used in this report, a metric of high social media engagement is the inclusion of an attachment (i.e., original photo or video content) in social media posts. The three types of Twitter message attachments included photos (69.2% of attachments), links (29.4%) and GIFs (animated images) (1.2%). Photos most commonly captured HKCC events (25.6%), images of fruits and vegetables (24.3%) and local campaign posters or infographics (17.4%). Although originality of these photos was difficult to assess, only 6.3% of the photos were generic HKCC images (e.g., MOHLTC provided logos), while the remaining 93.7% of photos were either original or borrowed from external sources.

### YouTube Content

The first 100 results from YouTube were collected and after applying inclusion criteria, there were 15 original videos collected. All but one of the videos were published by an HKCC community YouTube account (93.3%) and the other video was published by a municipality participating in the HKCC. At the time of data collection, there were 12 HKCC communities that had a YouTube account with the accounts publishing an average of 7.16 videos (minimum 1, maximum 24). There were three communities that published the majority of the original video content during Theme 3. The two Twitter search strategies outlined in the section above identified that one of these three communities was active on Twitter throughout Theme 3. Interestingly, the other two communities that published original video content on YouTube were not identified in the Twitter search strategies employed in this report, but both communities had active Twitter accounts during Theme 3. The YouTube results suggest that HKCC communities may not have utilized the HKCC social media toolkit to its fullest extent across all social media platforms.

# Discussion

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HKCC communities were the most frequent publishers of tweets across Theme 1 (57.0%), Theme 2 (61.4%) and Theme 3 (57.5%), posting more HKCC-related tweets than other Twitter accounts, such as those belonging to external organizations, municipalities or individuals. This suggests that HKCC communities retained a consistent level of social media use and engagement across all themes, while there was no notable increase in the publishing of tweets among other Twitter accounts. This was somewhat expected, as the HKCC was a social marketing campaign that encouraged communities to engage in theme-based promotion over social media and many achieved this through creating a Twitter account dedicated to HKCC content.

The tweets analyzed in this report represent only a sample of the larger body of tweets published during Theme 3 of the HKCC, “Choose to Boost Veggies and Fruit.” There were 1,684 tweets collected for Theme 1 and 2,725 tweets collected for Theme 2, while only 396 tweets were identified during Theme 3. This may seem like a significant decrease in the number of tweets across themes; however, as outlined below, we speculate that this is attributable to the search strategy employed, the length of the Theme 3 hashtag, and Twitter’s character limit.

After analysis was complete, the HKCC community Twitter accounts (which have been the most frequent publishers of tweets across HKCC Themes 1, 2 and 3) were searched manually to assess whether there were tweets published during Theme 3 that were missed by the search strategy. However, the tweets identified through this exploratory search did not meet inclusion criteria, as they did not include HKCC key messages or hashtags (see [Appendix D](#) for further details on these additional tweets). To include these tweets, the next HKCC media the analysis might broaden its inclusion criteria to include tweets that are related to the HKCC, but do not include key messages or hashtags.

A large proportion of tweets across Theme 3 promoted engagement with the Theme’s targeted behaviour – increasing fruit and vegetable consumption. While 27.9% of Theme 3 tweets promoted fruit and vegetable consumption, the target behaviours in Themes 1 and 2, increased physical activity (13.5%) and increased water consumption (24.5%), were promoted less throughout Theme 1 and Theme 2. Each new HKCC theme showed a demonstrable increase in the proportion of tweets that promoted the Theme’s target behaviour. This should be assessed once more during the analysis of the HKCC’s Theme 4 (reducing screen time) to identify if this trend continued.

A key part of the analysis in this report is the use of virality metrics as engagement indicators (e.g., retweets and likes) or as a proxy for measuring HKCC program involvement. These virality metrics capture the audiences’ interaction with online content and can help measure the impact of the tweets.<sup>6</sup> They also provide an indication of the audience’s agreement with the message.<sup>7</sup> This social endorsement may impact other users’ processing of the information from the Twitter message, as well as the decision making based on the content of the message.<sup>7</sup> Previous studies indicate that higher engagement with online social media content is more likely to lead to consideration of changing behaviours based on information disseminated within the tweet.<sup>6,7</sup> The extent to which HKCC Twitter messages performed

well or poorly is unclear, as this type of analyses has had limited application in similar community-based health promotion interventions for comparison. To validate this model for evaluating engagement, data from other parts of the HKCC evaluation can be used to assess whether social media engagement is linked to program participation and reach.

## Limitations and Future Directions

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This report extended previous media analyses of HKCC Themes by using NCapture to collect data from Twitter and YouTube; however, due to the length of time that elapsed between the publishing of relevant tweets and the data collection, NCapture could not be used to its full capacity. NCapture can only collect tweets as a dataset up to one week after they are published. Collecting tweets as a dataset allows all information associated with a tweet to be automatically imported to NVivo, which includes: username, date the tweet was published, user names of those who retweeted or liked the tweet, the location from which the tweet was published and more. This information was still accounted for manually through our coding strategy. Future media analyses of large-scale community-based programs that include a social media component might consider ongoing data collection using NCapture, so that the relevant information is collected and summarized in a more efficient and timely way.

While the analysis focused on the 396 tweets that were identified using Twitter's advanced search function, an additional search within each HKCC community Twitter account revealed an additional 1,195 tweets. These tweets were not included in the analyses because we wanted our search strategy to remain the same from earlier themes and thus, would not have been identified. The small sample size of tweets utilized in this analysis may introduce potential biases in the event that they are not truly representative of all Theme 3 tweets.

Intercoder reliability requires two or more coders to maximize reliability and limit subjectivity biases.<sup>10</sup> While quality checks were performed weekly throughout the project with a supervisor, future studies might consider using two or more coders.

# Conclusion

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This report contributes to the ongoing effort to understand the utility of, and engagement with, social media in health promotion programs, specifically the potential exposure to and engagement with HKCC social media messaging to HKCC Theme 3. The findings from this report also contribute to the evaluation of the broader HKCC program, which aims to assess the implementation and impacts of the program. Finally, this report employed novel approaches to understand social media engagement (i.e., virality metrics). The use of virality metrics for understanding social media engagement and the application of an evaluation model were novel approaches for understanding social media engagement compared to other theme-based analyses. These approaches were useful for providing indicators to evaluate engagement with social media that can be retroactively applied to Theme 1 and Theme 2 data, as well as in a future analysis of Theme 4. Moving forward, the methods can be adapted and applied to other social marketing campaigns.

# Appendix A

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The following table contains terminology specific to Twitter and the definitions of these terms.

**Table 7. Defining Twitter terminology**

Term	Definition
Retweets	A re-posting of a tweet. Twitter's retweet feature allows for the sharing of a tweet with another user's followers, while maintaining the original publisher's handle. Twitter users can retweet their own tweets or tweets from someone else.
Likes	Likes are used to show appreciation or agreement with a tweet. Twitter users can view tweets an account has liked from their profile page by clicking the Likes tab.
Followers	A follower is another Twitter account that has followed you to receive (view) your tweets in their home timeline. Subscribing to a Twitter account is called "Following." Anyone on Twitter can follow or unfollow anyone else at any time. A list of followers is generated after other Twitter users have followed an account.
Hashtag	A hashtag is any word or phrase immediately preceded by the pound (#) symbol (e.g., #HKCC). Clicking on this hashtag allows Twitter users to see other tweets containing the same keyword or topic.
Mention	Mentioning other accounts is done by including the "@" sign directly followed by a username. This is visible to the followers of the tweet publisher and the mentioned user.
Quote	A method of re-posting a tweet along with a comment.
Reply	A response to another person's tweet. If the Twitter account replying to the tweet is public, then the reply will be visible along with the tweet.
Bio	Twitter bios are personal descriptions of up to 160 characters, which serve as a way to characterize your persona on Twitter.

# Appendix B

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## Twitter Search Strategy

### Advanced Search: “All of These Words”

- Set Twitter’s custom data range to April 30, 2017 – December 31, 2017
- Execute the following search queries and review all results of each query
  - Healthy Kids Community Challenge
  - Choose to Boost Veggies and Fruit
  - Healthy Kids Community Challenge OR Choose to Boost Veggies and Fruit
  - Enfants En Santé
- Capture each query with NCapture
- Import each search into NVivo for coding

### Advanced Search: “These Hashtags”

- Set Twitter’s custom data range to April 30, 2017 – December 31, 2017
- Execute the following search queries and review all results of each query
  - #HKCC
  - #HealthyKidsON
  - #ChooseToBoostVeggiesAndFruit #ChooseToBoost
  - #HKCC OR #HealthyKidsON OR #ChooseToBoostVeggiesAndFruit OR #ChooseToBoost
  - #ChooseToBoostVeggiesAndFruits
  - #boostveggiesandfruit
  - #veggiesandfruit
  - #choosetoboostveggies
  - #healthykidscommunitychallenge
  - #EnfantsEnSantéON
- Capture each query as a PDF using NCapture
- Import each search into NVivo for coding

## YouTube Search Strategy

- Execute the following query in the search bar and review the first 100 results
  - (Healthy Kids Community Challenge) (Choose To Boost Veggies and Fruits)

# Appendix C

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## HKCC Community Twitter Accounts

The following list provides information as to which of the 45 HKCC communities have dedicated HKCC Twitter accounts. This information was last updated in August 2018.

**Table 8. HKCC Community Twitter Accounts**

Community	Handle
Town of Aurora	@FitKidsAurora
City of Burlington	@healthykidsburl
Municipality of Chatham-Kent	@superkidsck
Town of Collingwood	@CollingwoodHKCC
City of Toronto - Danforth-East York	@HKCCEastYork
Municipality of Grey Highlands	@HealthyKidsSEG
City of Hamilton	@HealthyKidsHam
Hastings and Prince Edward	@HealthyKidsHPE
City of Toronto - Humber-Downsview	@HealthyKidsHD
KFL&A Region	@KFLAHealthyKids
Lambton – Partners	@HKCCLambton
United Counties of Leeds & Grenville	@healthykidslg
Manitoulin Island	@HKCCmanitoulin
County of Middlesex	@MiddlesexHKCC
Regional Municipality of Niagara	@NiagaraKids
City of Peterborough	@HKCCPtbo
County of Renfrew	@HealthyKidsCor

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Community	Handle
City of Toronto - Rexdale	@HKCCRexdale
City of Toronto - Scarborough	@HKCCScarborough
City of Greater Sudbury	@healthykidsSud
City of Temiskaming Shores	@HealthyKidsTem
City of Thunder Bay	@healthykidstbay
Chigamik	@HKCCNorthSimcoe
De Dwa De Dehs Nye s	@HealthyKidsDAHC
Timmins-Misiway	@HKCCTimmins
Wabano	@HKCCWabano

## HKCC Community Facebook Pages

The following table provides information as to which of the 45 HKCC communities have dedicated HKCC Facebook pages. This information was last updated in August 2018.

**Table 9. HKCC Community Facebook Pages**

Community	Handle
Town of Aurora	@fitkidsaurora
City of Burlington	@HKCCBurlington
Municipality of Chatham-Kent	@SuperKidsCK
Town of Collingwood	@CollingwoodHealthyKidsCommunityChallenge
Municipality of Grey Highlands	@HealthyKidsSEG
City of Guelph	@EnergizeGuelph
City of Hamilton	@HealthyKidsHamilton
Hastings and Prince Edward	@healthykidshpe.ca

Community	Handle
County of Huron	@HealthyKidsCommunityChallengeHuron
Town of Kapuskasing	@healthykidskap
KFL&A Region	@KFLAHealthyKids
Lambton – Partners	@hkccclambton
United Counties of Leeds & Grenville	@healthykidslg
Town of Marathon	@SuperiorNorthGreenstoneHKCC
County of Middlesex	Facebook account, not page (Note: have to be accepted as a “friend” to see posts)
Regional Municipality of Niagara	@healthykidsniagara
City of Peterborough	@HKCCPtbo
County of Renfrew	@healthykidsrenfrewcounty
City of Sault Ste. Marie	@HealthyKidsSSM
City of Greater Sudbury	@healthykidsudbury
City of Temiskaming Shores	@HKCC.TS
City of Thunder Bay	@healthykidstbay
City of Toronto	@healthykidstoronto
City of Toronto-Humber Downsview	@HealthyKidsHD
City of Toronto-Rexdale	@HKCCRexdale
Chigamik	@HKCCNorthSimcoe
De dwa da dehs nye s	@HealthyKidsDAHC
Manitoulin Island	@HealthyKidsManitoulin
Timmins-Misiway	@hkcc Timmins Misiway

Community	Handle
Shkagamik-Kwe	@HKCCShkagamikKwe
Wabano	@HKCC.Wabano

## HKCC Community YouTube Accounts

The following table provides information as to which of the 45 HKCC communities have dedicated HKCC YouTube accounts. This information was last updated in August 2018.

**Table 10. HKCC Community YouTube Accounts**

Community	Videos Published	Link to YouTube Page
City of Burlington	6	<a href="https://www.youtube.com/channel/UCzUJOY9k3oVTfiMntU2bhGQ/videos">https://www.youtube.com/channel/UCzUJOY9k3oVTfiMntU2bhGQ/videos</a>
Hastings and Prince Edward	24	<a href="https://www.youtube.com/channel/UChePPuBFFZCNIUVA7M3BzEg">https://www.youtube.com/channel/UChePPuBFFZCNIUVA7M3BzEg</a>
KFL&A Region	1	<a href="https://www.youtube.com/channel/UCLx_dMtD-28jCuGNE5uXOKQ">https://www.youtube.com/channel/UCLx_dMtD-28jCuGNE5uXOKQ</a>
Lambton – Partners	1	<a href="https://www.youtube.com/channel/UC5_wiZPCTdpxV8ybke-kIGQ">https://www.youtube.com/channel/UC5_wiZPCTdpxV8ybke-kIGQ</a>
United Counties of Leeds & Grenville	5	<a href="https://www.youtube.com/channel/UCbTzm-iFaJFTPkQ_lyg20RQ">https://www.youtube.com/channel/UCbTzm-iFaJFTPkQ_lyg20RQ</a>
County of Middlesex	12	<a href="https://www.youtube.com/channel/UCjmKowODrL0tALv-S9j3wyQ">https://www.youtube.com/channel/UCjmKowODrL0tALv-S9j3wyQ</a>
Regional Municipality of Niagara	3	<a href="https://www.youtube.com/channel/UCzI3RwVGfKatieQzpuHADSVA">https://www.youtube.com/channel/UCzI3RwVGfKatieQzpuHADSVA</a>
Timmins-Misiway	1	<a href="https://www.youtube.com/channel/UCapwHL62qzW89umhvjCRJg">https://www.youtube.com/channel/UCapwHL62qzW89umhvjCRJg</a>
City of Thunder Bay	3	<a href="https://www.youtube.com/channel/UC89UXYYwid3z6kOz0sbvulQ">https://www.youtube.com/channel/UC89UXYYwid3z6kOz0sbvulQ</a>

Community	Videos Published	Link to YouTube Page
City of Toronto – Danforth-East York	12	<a href="https://www.youtube.com/channel/UCc4lo5yUXM_cV3c3rYuN30A">https://www.youtube.com/channel/UCc4lo5yUXM_cV3c3rYuN30A</a>
City of Toronto – Humber Downsview	16	<a href="https://www.youtube.com/channel/UC_4c6Zixgcdpc1cJNM9PBYg">https://www.youtube.com/channel/UC_4c6Zixgcdpc1cJNM9PBYg</a>
City of Toronto – Rexdale	2	<a href="https://www.youtube.com/channel/UCxeM1XuZcRsAaGWHuryPWTg">https://www.youtube.com/channel/UCxeM1XuZcRsAaGWHuryPWTg</a>

## HKCC Community Instagram Accounts

The following table provides information as to which of the 45 HKCC communities have dedicated HKCC Instagram accounts. This information was last updated in August 2018.

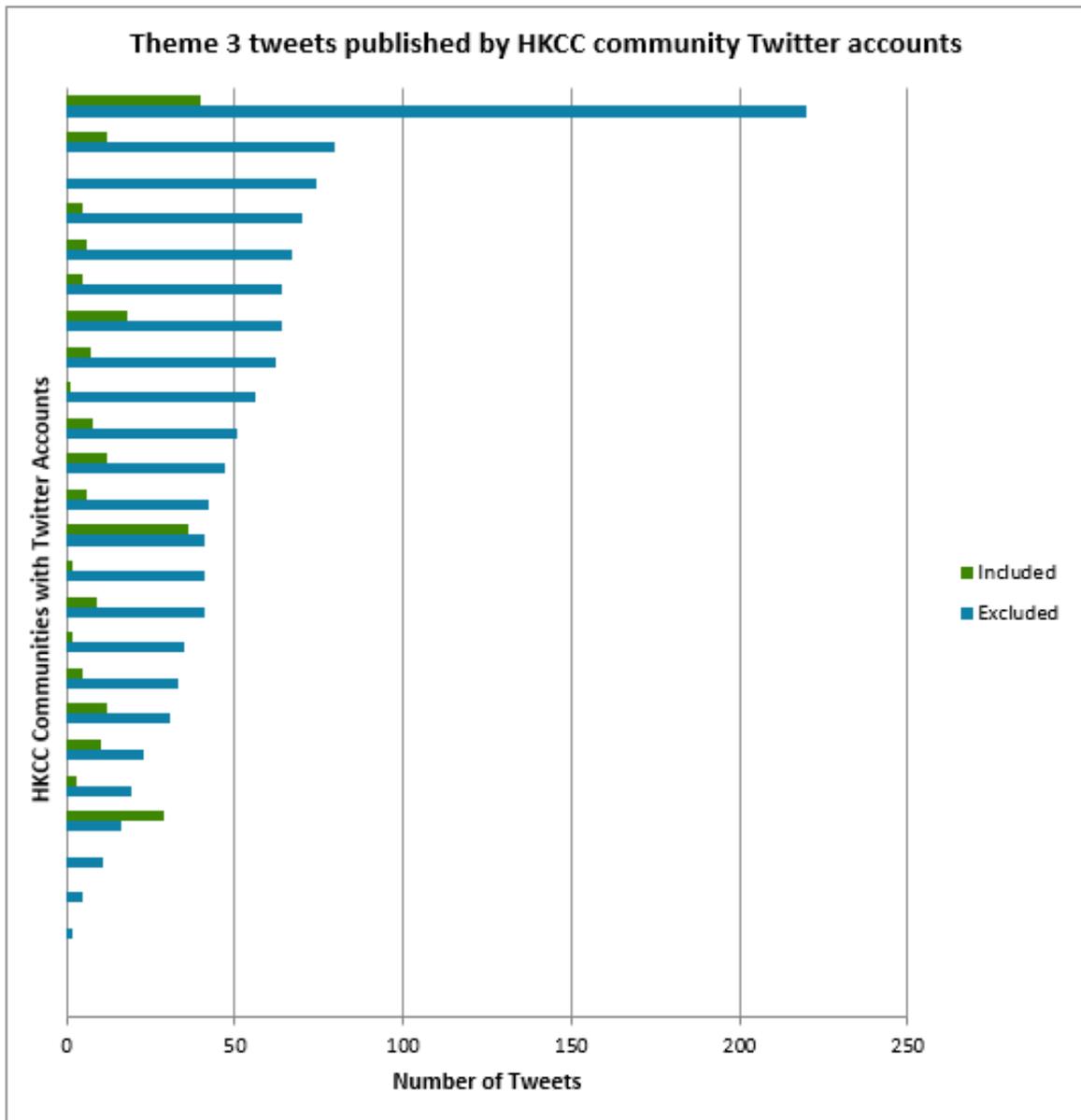
**Table 11. HKCC Community Instagram Accounts**

Community	Handle	Number of Total Posts (As of Aug 2018)	Date of First Post
Manitoulin Island	@healthykidsmanitoulin	38	Feb 6, 2016
Timmins-Misiway	@healthykidstimmins	88	Mar 21, 2017
City of Burlington	@healthykidsburlon	68	Oct 14, 2015
Town of Collingwood	@collingwoodhkcc	101	July 16, 2016
United Counties of Leeds & Grenville	@healthykidslg	4	June 2, 2016
Regional Municipality of Niagara	@healthykidsniagara	27	Feb 25, 2016
City of Toronto - Danforth East-York	@hkcceast york	187	June 28, 2016
City of Toronto - Humber Downsview	@healthykidshd	109	Apr 4, 2016
City of Toronto - Central Scarborough	@hkccscarborough	260	Jan 20, 2017

# Appendix D

This appendix contains a graph and table, both of which depict the number of tweets published by communities (n=26) with HKCC Twitter accounts (Data contains tweets from the initial Report Search Strategy and the Additional Search Strategy, tweets n=1423).

**Figure 5. Theme 3 tweets published by HKCC community Twitter accounts**



**Table 12. Tweets published by HKCC community Twitter accounts that were not captured by the search strategy**

Community	Handle	Number of Tweets
Town of Aurora	@FitKidsAurora	64
City of Burlington	@healthykidsburl	220
Municipality of Chatham-Kent	@superkidsck	23
Chigamik	@HKCCNorthSimcoe	5
Town of Collingwood	@CollingwoodHKCC	41
City of Toronto - Danforth East York	@HKCCEastYork	64
De Dwa De Dehs Nye s	@HealthyKidsDAHC	41
Municipality of Grey Highlands	@HealthyKidsSEG	No tweets
City of Hamilton	@HealthyKidsHam	2
Hastings and Prince Edward	@HealthyKidsHPE	80
City of Toronto – Humber Downsview	@HealthyKidsHD	16
KFL&A Region	@KFLAHealthyKids	51
Lambton - Partners	@HKCCLambton	47
United Counties of Leeds & Grenville	@healthykidslg	33
Manitoulin Island	@HKCCmanitoulin	19
County of Middlesex	@MiddlesexHKCC	74
Regional Municipality of Niagara	@NiagaraKids	67
City of Peterborough	@HKCCPtbo	31
Renfrew County	@HealthyKidsCor	11
City of Toronto - Rexdale	@HKCCRexdale	41

Community	Handle	Number of Tweets
City of Toronto - Scarborough	@HKCCScarborough	70
City of Greater Sudbury	@healthykidsSud	62
City of Temiskaming Shores	@HealthyKidsTem	35
City of Thunderbay	@healthykidstbay	42
Timmins-Misiway	@HKCCTimmins	56
Wabano	@HKCCWabano	No Tweets
<b>Total Tweets Missed</b>		<b>1,195 Tweets</b>

# References

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1. Neiger BL, Thackeray R, Burton SH, Giraud-Carrier CG, Fagen MC. Evaluating social media's capacity to develop engaged audiences in health promotion settings: use of Twitter metrics as a case study. *Health Promot Pract.* 2013;14(2):157-62.
2. Ontario. Ministry for Health and Long-Term Care. Healthy Kids Community Challenge: learn about the Healthy Kids Community Challenge - part of Ontario's Healthy Kids Strategy [Internet]. Toronto, ON: Queen's Printer for Ontario; 2018 [cited 2018 Jul 23]. Available from: <http://www.health.gov.on.ca/en/public/programs/healthykids/hkcc.aspx>
3. Borys JM, Bodo YL, Jebb SA, Seidell JC, Summerbell C, Richard D, et al. EPODE approach for childhood obesity prevention: methods, progress and international development. *Obes Rev.* 2012;13:299-315. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3492853>
4. Kesten JM, Cohn S., Ogilvie D. The contribution of media analysis to the evaluation of environmental interventions: the commuting and health in Cambridge study. *BMC Public Health.* 2014;14:482. Available from: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-14-482>
5. Neiger BL, Thackeray R, Van Wagenen S, Hanson C, West J, Barnes M, Fagen M. Use of social media in health promotion: purposes, key performance indicators, and evaluation metrics. *Health Promot Pract.* 2012;13(2):159-64.
6. Kim JW. They liked and shared: effects of social media virality metrics on perceptions of messages influence and behavioural intentions. *Comput Human Behav.* 2018;84:153-61.
7. Alhabash S, McAlister AR, Quilliam ET, Richards JI, Lou C. Alcohol's getting a bit more social: when alcohol marketing messages on Facebook increase young adults' intentions to imbibe. *Mass Commun Soc.* 2015;18(3):350-75. Available from: <https://www.tandfonline.com/doi/full/10.1080/15205436.2014.945651>
8. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Ladak A, Harrington DW, Manson H. A media analysis of "Run. Jump. Play. Every Day.": measuring potential exposure to the Healthy Kids Community Challenge. Toronto, ON: Queen's Printer for Ontario; 2016.
9. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Alegre R, Laxer RE, De Rubeis V, Manson H, Harrington DW. A media analysis of "Water Does Wonders": measuring potential exposure to the Healthy Kids Community Challenge. Toronto, ON: Queen's Printer for Ontario; 2018.
10. Macnamara J. Media content analysis: its uses; benefits and best practice methodology. *Asia Pac J Public Health.* 2005;6(1):1.

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