CASE STUDY

Sexual Exploitation Outreach with Text Messaging: Introducing Project Backpage

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SEXUAL EXPLOITATION OUTREACH WITH TEXT MESSAGING: INTRODUCING PROJECT BACKPAGE
Abstract

This case study provides an overview of a community-university research collaboration to explore the use of mobile phone text messaging within a sexual exploitation outreach program in the city of Edmonton, Canada. It begins with a brief description of the context within which the Edmonton’s Centre to End All Sexual Exploitation (CEASE) operates its outreach and support programming, touching on the challenges that come with the growth of online advertising for adult services. The paper will then describe the collaboration between CEASE and the Faculty of Extension at the University of Alberta to introduce mobile phone text messaging into its sexual exploitation outreach strategy. The impact of the campaign and emerging best practices will be discussed, concluding with a brief examination of future areas of research and collaboration.

Introduction

Over a decade ago, the Centre to End All Sexual Exploitation (CEASE) began a long-term commitment to serving as a social catalyst expanding Edmonton’s capacity to respond to issues related to sexual exploitation and human trafficking, particularly as manifested in street prostitution. Over the years, the non-profit organization has strived to inspire community partners to work together to seek lasting solutions to the very real harm experienced by individuals and communities caught in the web of sexual exploitation and related criminal activity. In collaboration with community partners, the organization aims to reduce harm and create long-term solutions through public education, client support, bursaries, counseling, trauma recovery and emergency poverty relief for individuals working to heal and rebuild their lives after experiencing exploitation.

With the growing presence on online advertising for adult services, organizations like CEASE face new challenges to their existing outreach strategies. Previously, outreach was primarily a street-based activity that involved making face-to-face contact with sex trade workers and victims of sexual exploitation. While personal contact remains an essential ingredient for exploitation outreach and support, in a growing number of cases it is now difficult or impossible to make initial contact with victims because they are not active on the street. The most obvious way to reach this population is to contact them through the telephone numbers that are included in the advertisements they post online. Experience from frontline agencies and EPS Vice detectives suggested that many if not most of the phone numbers posted on the website are associated with mobile phones with text messaging capabilities.

While this seems a relatively straightforward method, it does raise a number of considerations within a more comprehensive outreach strategy. In particular, there is the question of voice versus text messaging as the initial method of contact. While we have not attempted a controlled study using voice calling as a method of initial contact, there are some immediate challenges to this approach. For example, at any given moment the typical volume of advertising on Backpage.com ranges between 200-300 phone numbers. If a single voice call were to take 2 minutes at minimum, then to contact these all of numbers would take a minimum of 10 hours of constant calling. While the cost of making those calls might be relatively small, the staff time required to do so presents a challenge for organizations with limited resources.
Another consideration with regard to making initial contact with voice calls is the likelihood this method will result in effectively communicating a key message to the receiver. There are two issues here: first, the willingness of the person answering to listen long enough to hear the message without hanging up or otherwise interrupting the call; second, the likelihood that the person answering will retain or record the information being given during the call (e.g., CEASE’s phone number and website). With regard to call interruptions, recent data from the Pew Research Center suggests that voice-based telephone campaigns will face an “increasing difficulty in making contact with someone in a household, as well as in gaining cooperation once contact is made”\(^1\). With regard to information retention, it is reasonable to expect that in all likelihood the person answering the phone will not record details of the information being provided to them and may not be able to easily recall it after the conversation takes place.

Text messaging, however, offers some interesting possibilities to address these shortcomings of voice calls. First, it is possible to reach a relatively large sample of phone numbers without placing a major burden on valuable staff time. Based on our experience with FrontlineSMS, we can send text messages to 100 phone numbers in about an hour or less. FrontlineSMS can be programmed to send messages automatically from an existing database of phone numbers, so demands on staff time are reduced considerably. Moreover, the cost of sending text messages can be quite affordable, especially when purchased through a monthly text package or at bulk rates. For example, the package we used for this project was a Rogers Mobility prepaid add-on for $10 (CAD) per month that provides us with 2,500 text messages—more than enough to meet our needs for this project.

Perhaps more significantly, text messaging can overcome some of the challenges that can be expected with voice calls. The brevity and instantaneous appearance of a text message on a mobile handset makes it more likely that the person receiving it will open it and view the contents. In addition, if the text message contains the phone number and website addresses for the outreach organization, it makes it easier for the person receiving that text to recall this information at a later time should they want to do so. In fact, most mobile phones today will render phone numbers and websites as hyperlinks, making it a simple, one-step process for the recipient to place a call or visit the website. Of course, the recipient can always choose to delete the text message, but they might also choose to store it for later retrieval or reference.

Text messaging therefore can perform an important role in making initial contact and providing support information to this population. We want to stress that it is not a substitute for voice calls, which organizations like CEASE continue to use intensively for providing follow-up information and client support services. Instead, text messaging offers complementary strengths to voice-based telephone support services, particularly when it comes to making initial contact with those who are advertising for adult services online at websites like Backpage.com.

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The Backpage Project: Reaching out with SMS

Having recognized the possibilities for text messaging to reach victims of human trafficking and sexual exploitation, the Edmonton Police Service, CEASE, and other interested organizations met with the MARS (Mobile Applications for Research Support) Lab at the University of Alberta in October 2012. The initial meeting focused on whether it would be possible to send text messages to phone numbers drawn from the website Backpage.com as a method of making initial contact with and providing support information to potential victims of sexual exploitation and human trafficking.

Backpage Project Phase 1

The initial meeting resulted in the decision to undertake a preliminary test to send a pre-scripted text message to a sample of 25 phone numbers drawn from the adult section of Backpage.com and then monitor responses during the next seven days. The pre-scripted message was drafted by CEASE in consultation with other related organizations. The phone number in the message directs callers to the CEASE support line:

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Want something different in your life? Forced to do something you don’t want to? We care.
Support for education, counseling, income. Call 780-471-6137
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Any incoming messages received at the MARS Lab equipment in the week following the test were recorded and were reviewed at a follow-up meeting.

It is important to note that this text messaging campaign was not intended to be interactive. The main objective was to send information messages to the phone numbers advertised on Backpage.com. Nonetheless, we were not surprised to receive responses from the initial batch of outgoing messages. We received two replies, one asking about the organization that sent the message, the other a polite request to “refrain from sending ur let me help u messages to this number.”

**Phase 1: Details**

**Set-up:**
For this test, a password-protected laptop computer running FrontlineSMS was connected to a GSM modem (Huawei E-series) containing a Rogers Mobility SIM card. The Rogers SIM card is registered with a prepaid account that has a text-messaging “add-on” plan. The laptop and GSM phone modem were located in a locked and secure office area on the University of Alberta premises.

**Computer Software:**
The software being used for the project was FrontlineSMS v1.6.13, a free, open-source text messaging application created for community development projects. The system requires a computer running FrontlineSMS connected to a mobile phone. This turns the computer into a two-way text-messaging hub.
Procedure:
Vice Detective from Edmonton Police Service provided a list of 25 anonymized telephone numbers drawn from Backpage.com. These numbers were entered manually into the FrontlineSMS software and added to a single contact group. The content of the test message was provided by CEASE and contained a phone number for the CEASE support service line. The message was then sent to the contact group containing all 25 phone numbers. It took approximately 15 minutes for all of the text messages to be sent through the GSM phone modem.

Backpage Project Phase 2

Parties met to review the results of the initial test in late November, where it was agreed that text messaging was appropriate for this particular application. Project partners then decided to proceed with a second phase, extending the duration of the test and frequency of message distribution. In particular, the team decided on the following parameters for phase 2:

- Increase the length of the test from one week to four weeks;
- Draw two sets of phone numbers from Backpage.com taken two weeks apart to expand the range of phone numbers being contacted;
- Increase the batch size to 48 phone numbers (per sample);
- Split the phone numbers into two equal groups, with one receiving weekly messages, the other receiving daily messages;
- Create a Do Not Text (DNT) list. All recipients who reply with a message and request to be removed from the distribution list are added to this list and will not receive any additional messages during the test.

The following pre-scripted messages drafted by CEASE and a second participating organization, Chrysalis Network, were used for the second phase of the test.

CEASE:

“Want help? More choices? We care. There is hope. Counseling, training, income support, victim advocate, peer coach. Please CEASE 780-471-6137”

Chrysalis Network:

“Chrysalis Network offers free 24-7 phone counseling to workers in the adult industry. When you’re ready to talk, we’re here to listen. Call 1-866-528-7109”

As in the first phase, we decided not to respond to any reply messages from recipients, but did archive them and reviewed them at a follow-up meeting with the team.
Phase 2: Details

Set-up and configuration:
Identical to Phase 1 with laptop running FrontlineSMS, using GSM phone modem; however, a set of six contact groups was created on FrontlineSMS to distinguish between those phone numbers that would receive weekly versus daily messages, as well as to distinguish those phone numbers drawn for the first batch (weeks 1-2) from those in the second batch (weeks 3-4).

Procedure:
Prior to the launch of the test, a spreadsheet file with a list of 48 anonymous telephone numbers was provided by Edmonton Police Service. The spreadsheet was imported into FrontlineSMS and numbers were assigned randomly to either a daily or weekly group. Prior to week three of the test, a second spreadsheet with a list of 48 new numbers was provided and imported into FrontlineSMS. This new set of numbers replaced the first batch used during the first half of the test. A message schedule was devised for the four-week test and served as the basis for sending daily and weekly messages during this time. A scheduling feature on FrontlineSMS was used with limited success to automate the sending of daily messages.

During the test, all messages were sent according to the pre-determined schedule. The daily groups (Stage 2a – Daily and Stage 2b – Daily) received a total of 15 SMS messages, while the weekly groups (Stage 2a – Weekly and Stage 2b – Weekly) received a total of four SMS messages. The total number of individual messages sent during this test was 324 SMS messages.

As with the first phase test, we received replies from some of the recipients of the messages. Over the course of the four-week test, there were a total of 30 text message replies from 20 different phone numbers. Again, it is important to remember that reply messages are not the primary focus for the
Replies are considered incidental to the campaign; but, as we began to discover with experience (and will discuss later in this paper), reply messages provide valuable insights regarding campaign planning and strategy.

Replies from recipients during the four-week test were analyzed using Braun & Clarke’s thematic analysis\(^2\). This thematic analysis is considered a manifest analysis since it focuses on frequency of words, ideas or categories manifest within the content. Through a manifested thematic analysis of replies was received from participants, the following categories of messages were established:

Categories related to message tone:

Positive replies – e.g. “Thank you its an amazing thing you’re doing”
Negative replies – e.g. “don’t text me that bullshit”
Neutral replies – e.g. “no I’m good thanks”

Categories related to message intent:

Conversational replies – e.g. “I tried...Not a lot of support around mental health”
Question replies – e.g. “What who is this?”

The thematic analysis was not intended to be definitive or generalized outside of the study but it did show an interesting range of responses to the text message campaign. Some of the messages were positive in tone, while others rejected the offer of support. Some replies sought additional information or simply commented in response to the text message.

One important observation during this phase of the project was that a most (97%) of replies were received from recipients within one hour of the message being sent out to them. Approximately 20 per cent of the recipients replied to our messages at some point during the campaign. A total of 10 responses indicated they did not want to receive text messages from us and these numbers were added to our Do Not Text (DNT) list.

Beyond the immediate responses to our text messages, it is difficult ascertain impact of this campaign. This is in part because it is difficult to know in any given case whether contact between CEASE and a client is due to them receiving a text message. However, during the four-week test (which ran from Nov. 29 to Dec. 26) we became aware of three instances where victims made contact with CEASE or Chrysalis for support, stating they had received a text message:

- December 3, 2013 - CEASE received a phone call from a woman originally from Vancouver who wanted to explore other options and resources;
- December 8, 2013 - Chrysalis received a phone call from a woman who is isolated, at risk of relapse into a past drug addiction and looking for support;
- December 13, 2013 - CEASE made contact with a woman who was forced by her pimp to come to Edmonton from Toronto.

The project team met in January 2014 to review the results of the phase 2 test and it was decided to conduct a third phase. In this phase we would expand the project to increase the scale of the campaign to 100 messages every three days over an eight-week period. We would also introduce more sophisticated techniques, including automated phone number extraction from the Backpage.com website and a live interactive texting session with a CEASE counselor.

**Backpage Project Phase 3**

For this phase of the project, we planned on sending pre-scripted text messages to a sample of 100 phone numbers drawn from the adult section of Backpage.com for an eight-week duration and monitor the responses during this time. Messages were sent every three days for the duration of the test.

Pre-scripted messages were revised from previous phases and included more information. For this phase we did not restrict messages to 160 characters, deciding that multiple messages containing more contextual information about the organization, as well as a phone number and website address, was an important consideration when reaching out to this population. CEASE, CEASE’s Night Safety Centre (NSC) and Chrysalis Network provided the following messages for this stage of the test.
CEASE:

“Want out? There is hope. Bursaries, counselling, victim advocacy, peer support. Center to End All Sexual Exploitation (CEASE) 780-471-6137. CEASE is a caring community. Our work includes counselling trauma recovery and emergency poverty relief to help rebuild your life. www.ceasenow.org”

Safety Night Centre:

“Victim of violence at night? Night Safety Centre is a safe place for you. Wed-Sat from 10pm-8am. Call 780-756-5351. We provide a safe place to rest, with food, shower, laundry, and first aid. We can help you find resources for health, housing, victim advocacy, counselling or other needs. www.ceasenow.org”

Chrysalis:

“Chrysalis Network offers free 24-7 phone counseling to workers in the adult industry. When you’re ready to talk, we’re here to listen. Call 1-866-528-7109”

Phase 3: Details

Setup and configuration

For this test, a laptop computer running FrontlineSMS was connected to a GSM modem (Huawei E-series) containing a Rogers Mobility SIM card. The Rogers SIM card is registered with a prepaid account with a text messaging plan. The laptop and GSM modem were located in a locked and secure office area at the University of Alberta’s Faculty of Extension (located at Enterprise Square). The laptop was password protected and connected to a secure network.

FrontlineSMS (v1.6.13) was again used for this test. FrontlineSMS version 2.0 was released in mid-2012, but at that time did not have all of the features present in version 1.6.13 that were required for this test.

Additional Software

A commercial software application called GSA Email Spider was used to automatically extract phone numbers from Backpage.com.

GSA Email Spider was introduced as a trial measure to determine if it would provide a more efficient means of extracting phone numbers from Backpage.com. From earlier phases of the project, it was determined that with a manual process it takes approximately two to three hours to manually extract 50 phone numbers. The spider software, however, can be configured to automatically visit individual links on a particular website, looking for contact information according to specific parameters set by the user. For this test, GSA Email Spider was configured only to look for 10-digit phone numbers. The software compiles a list of all phone numbers extracted from the specific website, which is then saved as a CSV file.
Typically, a phone number extraction using GSA Email Spider using the basic configuration shown in to the left will extract 280-300 phone numbers from the “Edmonton” section of the adult services category on Backpage.com. This typically takes only a few minutes to do. However, we discovered that the resulting CSV file requires some manual cleaning and re-formatting to remove extraneous characters and unwanted phone numbers (e.g., numbers beginning with 1-800, 1-900) before it can be imported into FrontlineSMS and used as a database of contacts.

Having drawn the extraction of phone numbers from the website, the next step is to create a random sample of 100 contacts for the project. This was done using a randomize function within the CSV file before importing into FrontlineSMS.

This CSV file was then saved on Google Drive and re-opened in Google Sheets. In Google Sheets, the contacts must be saved in a specific format for import into FrontlineSMS. Each contact phone number must contain the international dialing prefix “+” when it is imported into FrontlineSMS, and we discovered that Google Sheets can save a file with a ‘+’ at the beginning of the field. The find and replace function was used to add “+1” (i.e., the North American country code) in front of each contact in Google Sheets. This file is then downloaded in CSV format and ready for importing into FrontlineSMS.
Importing phone numbers into FLSMS

During this phase we created CSV spreadsheet file with 100 anonymous telephone numbers extracted from Backpage.com on a weekly basis (over a period of eight weeks). FrontlineSMS has the ability to import contacts and arrange them according to established contact groups. In order to import the contacts, the following field headings must be created in line 1 of the CSV spreadsheet: Name, Mobile Number, Current Status, Group(s).

For North America, mobile numbers must be in the format “+1xxxxxxxxxx” in order to successfully import the contact. Current Status must be set to TRUE for every contact in order to ensure the contact is active. Group(s) must be in the format “/[groupname]” in order to be successfully imported into the correct group. This Excel spreadsheet file must then be saved as a CSV (comma separated value) file as opposed to a typical Excel file.

The CSV file is then imported to FrontlineSMS using the Contact Import function. If a duplicate contact is detected by FrontlineSMS when importing contacts, it will update the original contact with any new information (e.g. contact group), but not create a new duplicate contact. FrontlineSMS will not allow there to be two contacts with the same phone number. However, FrontlineSMS does not alert the user when a duplicate contact has been filtered out.

This process was completed every six days in order to refresh the database and to ensure that only currently advertised Backpage.com phone numbers were used in the phase 3 campaign. The entire process, from contact extraction to formatting and preparing the CSV file for importing into FLSMS took approximately 60 minutes each time we did it.

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3 The most recent version of FrontlineSMS will alert users to duplicate numbers.
In order to organize the expanded database for this phase of the project, we created a set of ten contact groups to which phone numbers were added. Contact groups within FrontlineSMS help organize contacts and allow the user to send unique messages to individual contact groups. A single contact can be a part of multiple contact groups, and a separate contact group was assigned for each new sample of phone numbers extracted from Backpage.com. This allowed us to identify any numbers that might be repeated in subsequent extractions. The following figure shows the schedule of extractions and messaging for the Phase 3 campaign.

FrontlineSMS was operational on a 24/7 basis for the duration of the trial and was monitored regularly by members of the project team. When the system received any incoming SMS replies, FrontlineSMS was set up to automatically forward these messages via SMS to members of the team. If at any time during the campaign a recipient requested to be removed from the distribution list, either directly (e.g. “Please take my name off your list”) or indirectly (e.g. “f*** off”), the research team placed the recipient’s phone number on a Do Not Text (DNT) list and did not receive any further text messages from the project. To do this, we renamed the contact as DNT and a note was added to the contact with the date they were added to DNT list and what contact group the recipient was a part of prior to going on the DNT list.

The system also receives an automated reply from the mobile phone provider whenever an SMS message was sent to a landline. This automated reply reads: “Destination 780-***-****. Reply E to send Rogers TXT 2 landline msgs in English.” These landline contacts are renamed as Landline were moved into a Landlines contact group and removed from the campaign.

Additionally, it was discussed and agreed by all members of the team (including the Edmonton Police Service) that if any reply message was received that was of concern (e.g. threatening to life or safety) that CEASE would follow up directly with the recipient by means of a voice call (No such messages were received during the test).

Over the course of the eight-week campaign, we sent 2,431 individual SMS messages to 478 unique phone numbers. We received a total of 125 replies from 78 unique phone numbers, covering a range of categories based on our manifest thematic analysis method introduced in phase 2. Again, it is important to note that reply messages were incidental to the campaign and not part of the primary objective, which was simply to get the information out to the target population.

However, we can gain some important insights by analyzing the replies. For example, we observed that about 97 per cent of the replies come within the first hour of us sending the messages out. This suggests that recipients are likely to look at the incoming message soon after it is received. Messages sent between 12pm and 4pm were most likely to be replied to as compared with those sent at other periods of time, suggesting the possibility of an optimal time of day for reaching this population.

About 10 per cent of recipients requested directly, or indirectly, to be removed from the campaign and were added to the DNT list, while almost half of the replies were either positive or conversational in tone or took the form of questions from the recipients. This suggests that such a campaign will not receive widespread resistance from this population, but in fact could prove to be an important source of trusted information were it to be carried out consistently and respectfully.
During this eight-week campaign, we became aware of at least four instances where recipients contacted CEASE or Chrysalis as a result of receiving an SMS message.

Mar. 21, 2013 CEASE received calls from two women who received texts and wanted to meet face to face to explore options.

April 17, 2013 CEASE received two calls (one male, one female) responding to the text message campaign.

In addition, during this phase we conducted an experiment in two-way interactive messaging to explore possibilities for CEASE counsellors to communicate directly to this population using FrontlineSMS. On April 26, we had a CEASE counselor on hand who responded directly to incoming replies from recipients. This led in two instances to positive interactions with multiple exchanges of messages between the counselor and the recipient over a period of 30 minutes, one which resulted in the recipient agreeing to a face-to-face meeting with the counselor at the CEASE office.

Key Learning

Overall, FrontlineSMS has proven to be a useful tool in supporting this outreach campaign. For an organization like CEASE, the software is cost effective and provides a means to communicate with potential victims of sexual exploitation and human trafficking that might otherwise be difficult to reach. In combination with a software application like GSA Email Spider, we were able to quickly and efficiently create and regularly refresh a database of contacts from the Backpage.com website. The relative cost of text messaging for the campaign is almost negligible using the prepaid add-on service. Impact is difficult to measure, but the campaign did result in at least seven confirmed responses to the text messages with individuals contacting CEASE directly.

Some of the best practices that emerge from the Backpage Project may be helpful to other organizations interested in using text messaging for similar types of campaigns:

- It is not necessary to send messages everyday. Weekly or biweekly messaging may be sufficient to reach the population without overwhelming it with incoming text messages.
- Create a Do Not Text list and respect requests from recipients to be removed from the campaign.
- The text messaging campaign has the potential to create a relationship between the outreach organization and the recipient and it is important to establish a trusting, respectful engagement with the population if the objective is to promote further contact with them.
- Include contextual information about the organization, as well as the phone number and website. The 160 character limit may not be as significant today, as most smart phones have messaging applications that make it easy to read contents that span more than one text message.
- Spider software like GSA Email Spider can be used successfully to extract phone numbers from websites like Backpage.com and, in turn, provide an efficient way to create a database of phone numbers for these kinds of campaigns.
• Most recipients are likely to view and reply to a message within the first hour of receiving it. Prepare staff and call-takers in advance when a message campaign is planned so that they are ready for possible incoming phone calls and inquiries.

• Two-way interactive messaging with recipients could provide an important enhancement to the campaign, but needs further study and should be done only in close cooperation with the frontline agency and with an experienced counselor on hand.

Plans for the Future

Given the initial success of the campaign, the team is now planning several next steps. The first of these is to attempt a bilingual campaign using both English and Chinese language messages. Early tests with FrontlineSMS indicate it is possible to send messages in both languages. According to Edmonton Police Service and CEASE, there is a significant population of Chinese-speaking individuals who are possible victims of human trafficking. It is believed that in some cases, a message in Chinese language will be more effective because of linguistic limitations.

The project will also consider the possibility of developing a protocol for two-way interaction with message recipients. There is important opportunity and a responsibility to respond to replies coming from recipients, and having a trained counselor on hand for that “golden hour” when messages are being sent out, might be an effective way to further improve likelihood of followup contact with victims who may be seeking help.

During the project we were constantly aware of the importance of establishing trust with the population by providing them with reliable and helpful information. As part of that consideration, we are looking at the possibility of expanding the campaign to include health and safety advice as part of the outgoing messages to provide this population with important information that affects their day-to-day lives.

We also realized through the experience of this project that this kind of campaign need not necessarily be a continuous year-round activity, which can place a drain on resources for the organizations involved. Instead, the team considered the times of year they felt campaigns would be most effective. As a result of that discussion, and based on an assessment made by a CEASE counsellor familiar with the population, it was determined that 2-3 campaigns scheduled at key points in the year (spring, summer, fall) provide an optimal balance between reaching the population when it was most receptive while not over stretching the resources of the outreach organizations involved.

The key to the success of this initiative going forward will be to establish a sustainable model by which campaigns can be planned and carried out with the participation of all key stakeholders. At this time, such a model remains uncertain, but we are continuing to work together to identify sources of funding and support that will make this possible.