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“Ligne Verte” Toll-Free Hotline: Using Cell Phones to Increase Access to Family Planning Information in the Democratic Republic of Congo

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Abstract

In 2005, Population Services International launched the Ligne Verte toll-free family planning hotline in the Democratic Republic of Congo as part of its the family planning program. This pilot program provides confidential, accurate family planning information, and refers potential users to the *Confiance* network of family planning clinics and pharmacies. From 2005-2008, the Ligne Verte received greater than 80,000 calls, over 80% of which were from men. The hotline is an effective, low-cost intervention that can be easily replicated in even the most challenging settings. It is particularly effective tool for reaching men.

Introduction

After nearly a decade of severe civil unrest in the Democratic Republic of Congo (DRC) from 1994 – 2003, the use of modern contraceptive methods fell from an estimated 15% in 1985 (UNFPA, 2008) to 5.8% in 2007 (DHS, 2007). This decline was likely attributable in large part to destroyed health infrastructure and shortages in family planning products and trained personnel during the war, as millions of men and women who had or who wanted to use modern birth control no longer had access to modern contraceptives.

In 2003, following the end of the conflict, Population Services International (PSI) and its local affiliate, Association de Santé Familiale (ASF), launched a USAID-funded family planning (FP) program which eventually covered key urban areas in 8 of

DRC's 11 provinces. In the early phases of this program, during communication activities PSI/ASF FP staff noticed a striking lack of knowledge about the FP products and services. Misleading rumors about modern contraceptives were also widespread. These were both barriers to the use of FP products and services that existed or were being re-introduced.

In response to this situation, PSI/ASF introduced the *Ligne Verte*, a toll-free family planning hotline, in 2005. The hotline was intended to answer general questions about birth spacing, correct use of FP methods and strategies for avoiding unwanted pregnancy, as well as to orient FP users and potential users to ASF's network of FP clinics and pharmacies. From 2005-2008, the hotline received over 80,000 calls.

Background

The Democratic Republic of Congo

With nearly 70 million inhabitants, the Democratic Republic of Congo (DRC) is Africa's fourth most populous country (UN Population Division, 2008). An annual growth rate of 2.9% a year means the population is increasing by nearly 2 million people each year, making DRC one of the world's fastest growing countries. The United Nations estimates that by 2050, DRC's population will grow to 130-250 million (UN Population Division, 2008).

From 1994-2003, DRC was the site of the world's deadliest conflict since World War II. An estimated 5.8 million people died as a direct or indirect result of the fighting and an additional 3.4 million were displaced (Coghlan et al., 2007). For more than ten years during and after the conflict, there was limited access to FP services and affordable, quality contraceptives. Unmet need for family planning is now very high. More than 57% of Congolese women reported that they would like to space or limit their births, but only 5.8% were using a modern contraceptive method, while another 15% were using traditional methods (DHS, 2007). The DHS estimated that DRC has an unmet need of 24%, though the number jumps to 39% when women who are using traditional methods are taken into account.* This translates into over three million

Congolese women with an unmet need for modern contraceptive methods.

To address the high level of need for FP in the DRC, in 2003 PSI/ASF initiated a family planning program, with financing from the United States Agency for International Development (USAID). Working through existing private sector clinics and pharmacies, PSI/ASF provides comprehensive training and ongoing support to health care providers, pharmacists and mobile educators in order to make high quality family planning information, counseling and products accessible. PSI/ASF works with the Ministry of Health's National Reproductive Health Program (Programme National de Santé Reproductive - PNSR) and NGO and funding partners to ensure collaboration and complementarity in the establishment and implementation of its FP activities.

The FP program's network of clinics, pharmacies, mobile educators and contraceptive products are grouped under the umbrella brand *Confiance*. The *Confiance* network is present in 14 cities in 8 of DRC's 11 provinces, and includes 78 partner clinics, 277 partner pharmacies and 113 mobile educators. It distributes five modern contraceptives including two oral contraceptive pills (one combination pill and one progesterone-

* This high level of traditional use may imply an even higher level of unmet need. DRC has one of the highest traditional method use rates in sub-Saharan Africa. It is particularly unusual to have a traditional method rate which is nearly 3 times the modern use rate. It is possible that this high rate of traditional method use is a result of the decline in the availability of modern methods during the war, and that many former users of modern methods have transitioned to traditional methods, although there are no studies at this point to verify this speculation.

only pill), a three-month injectable, the intrauterine device (IUD) and the standard days method with CycleBeads®. Since 2003, PSI/ASF's FP program has provided more than 300,000 couple-years of protection. However, this program reaches only a small portion of Congolese women of reproductive age with outstanding unmet need.

The *Ligne Verte* toll-free hotline (*Ligne Verte* is the French phrase for “toll-free hotline”) was designed as an experiment to extend the FP program's reach and to respond directly to those in need of accurate FP information and referrals to FP products

and services. The combination of low contraceptive prevalence rate (CPR) and high unmet need, coupled with relatively high levels of knowledge of at least one modern contraceptive method[†] (DHS, 2007), indicates that one of the primary barriers to contraceptive use may be due in part to the lack of knowledge on the availability of contraception and FP services that are available (Kayembe et al, 2006). At a time when cell phones were still relatively rare, PSI/ASF saw the potential to capitalize on this rapidly expanding technology as a means to increase the scope of localized FP “information, education and communication” IEC activities.

Cell Phones in DRC

Cell phone technology is still a relatively new technology in DRC, with only 10% of Congolese owning cell phones and 50% living within cell phone service range in 2007 (CIA World Factbook, 2009 - International Telecommunications Union, 2008). Cell phones are becoming increasingly popular – cell phone subscriptions have long since surpassed the 10,000 fixed telephone lines that existed in 2007, likely because of the comparative speed and cost-efficiency of establishing cell phone networks (CIA World Factbook, 2009; Vodafone 2005).

The reach of cell phone technology may be far greater than indicated by subscription

numbers, as cell phones are often shared in resource-poor settings like DRC (Kaplan, 2006). Additionally, vendors throughout the DRC generate income by selling cell phone use by the minute. Anecdotal evidence from calls to the *Ligne Verte* indicates that many calls are made from shared or borrowed phones. The prevalence of phone-sharing is important because it increases the accessibility to cell phones, far beyond those who own their own mobile phone (Vodafone, 2005).

[†] According to the 2007 DHS, 82% of women and 89% of men know of at least one method of contraception (pg. 57).

The *Ligne Verte*: Project Overview and Objectives

PSI/ASF saw the burgeoning cell phone market as an opportunity to increase the reach of relevant and up-to-date information on FP throughout the country. *Ligne Verte* was designed with three goals in mind:

1. To serve as a pilot to see if a cell phone FP hotline could be successful in the DRC
2. To provide confidential and accurate FP information
3. To refer potential users to *Confiance* network clinics

The hotline extends PSI/ASF's inter-personal communication (IPC) beyond the existing outreach activities, which are otherwise limited to the specific areas where PSI/ASF's FP program is present.

In 2005, PSI/ASF approached the two dominant cell phone service providers at the time, Vodacom and Zain about setting up a toll-free hotline paid for by PSI/ASF - the first request of its kind in the DRC.[§] Only Vodacom was able to establish a per-caller toll free hotline – but limited to callers within the Vodacom network. Annual operating costs for the *Ligne Verte* are about \$8,000, based on a rate per call of \$.36 and salaries for the educators. PSI/ASF advanced Vodacom \$1,500 per quarter then reimbursed for any charges over that amount, using program income from sales of *Confiance* commodities from the USAID-funded FP project.

The *Ligne Verte* operates out of a room in the PSI/ASF Kinshasa office, using a fixed phone line which does not carry increased costs for PSI/ASF. Mobile educator outreach workers rotate into the hotline position in 3-month shifts and answer calls in two 4-hour shifts each day. The educators who respond to calls are trained to answer FP-specific questions from callers and are given a list of all *Confiance* partner sites for clinic or pharmacy referrals. *Ligne Verte* extends the reach of one-on-one interactive communication on FP beyond the reach of traditional IEC events held in *Confiance* implementation sites by allowing for confidential delivery of FP information in a dynamic, interactive way which responds directly to callers' needs and concerns. Since contact is initiated by callers, the hotline is responding to a population that is proactively expressing a need for FP information.

The hotline is operational during PSI/ASF Kinshasa's regular working hours of Monday to Friday from 8 A.M. to 4:30 P.M. The hotline's operating hours are a function of both quality assurance and necessity as the electricity needed to run the phone can only be guaranteed during regular office hours. Calls can be answered in French as well as the two most prevalent local languages, Lingala and Swahili. Educators are selected for rotations into the *Ligne Verte* based on their ability to speak all three of these languages.

[§] The CDC office in DRC set up an HIV hotline around the same time but its costs are supported by three local cell networks and are not reimbursed by the organization.

Information about each call is recorded by hand in the hotline log book. Callers are asked for province or city, gender, age and marital status. All calls are confidential and no personal information that could compromise confidentiality is recorded. If necessary, callers are referred to *Confiance* clinics and pharmacies for follow-up services. Those who do not live near *Confiance* clinics are referred to their nearest health center, which may or may not offer FP products and services.

Ligne Verte is promoted in all *Confiance* information, education and communication

IEC activities, including open house events, community events, household visits and mass media radio and television ads. The *Ligne Verte* number is printed on pocket calendars and brochures that are distributed during educational events and at points of sale. The *Ligne Verte* number is also included in all *Confiance* product packaging in order to encourage people to ask questions or raise concerns regarding products they are using. Furthermore, anecdotal evidence from callers suggests that information on the hotline is often spread by word of mouth.

Key Results

The *Ligne Verte* has received an average of 20,000 calls per year, from throughout the country, including provinces and areas where PSI/ASF's FP program is not present. Call volume per province does not appear to be a factor of population size in targeted urban areas or number of FP sites per province (see *Table 1* below). Call volume does not correspond directly to province population or PSI/ASF's FP program coverage. For example, more than 8% of calls in

2008 were from the 3 provinces where PSI/ASF does not implement family planning activities. It is unlikely that differences in program implementation have a substantial impact as all provinces follow a standard approach to FP and *Ligne Verte* promotion. Anecdotal evidence from the field indicates that call levels are likely most influenced by the levels of Vodacom market share in the different provinces.

Table 1. Calls to the *Ligne Verte* by province.

Province	Total Calls	% of Calls	# of FP Sites	Estimated Target Population (of all sites with PSI FP activities)
Kinshasa	5,754	28%	1	8,000,000
Katanga	7,865	39%	5	2,750,000
Bas Congo	727	4%	2	545,000
South Kivu	533	3%	2	735,000
North Kivu	280	1%	1	300,000
Prov. Oriental	1,130	6%	1	680,000
Equateur	763	4%	1	300,000
Kasai Occid.	1,342	7%	1	720,000
Maniema*	584	3%	0	0
Bandundu*	630	3%	0	0
Kasai Oriental*	428	2%	0	0
Total	20,036	1500	14	14,030,000

* PSI/ASF does not have any FP activities in these three provinces.

On average, more than 80% of calls to the *Ligne Verte* relate to family planning. The most frequently asked questions from callers pertain to the following:

- side effects of specific contraceptives (generally pills, injectables or IUD)
- location of *Confiance* network clinics or pharmacies
- the meaning of ‘birth spacing’ or ‘family planning’
- general information about contraceptives and/or *Confiance* products
- rumors concerning contraceptives

Almost 20% of calls are related to non-FP topics. Some of these callers are seeking information on HIV or other health issues, or information on other PSI/ASF program areas. However, many people simply call because they are curious about the “toll-free

hotline,” which is not a widely understood concept in DRC. These callers often ask why the hotline is free, or request free phone credit, money or some other type of assistance. On more than one occasion a caller has asked for assistance finding a wife.

Although the *Ligne Verte* originally was conceived as a tool for reaching the FP program’s primary target group of women of reproductive age, the overwhelming majority of calls to the hotline are in fact from men. The proportion of male callers is about 80% annually, and ranged from 70% in Kinshasa to 90% in Katanga in 2008 (see call data below). It is not clear why more men are calling; possible reasons may be that men have greater access to cell phones and higher exposure to mass media messages (DHS, 2007).

Table 2. 2008 call data by gender.

Province	Men	Women	Total
Kinshasa	4,072	1,682	5,754
Katanga	7,188	677	7,865
Bas Congo	603	124	727
South Kivu	481	52	533
North Kivu	236	44	280
Prov. Oriental	972	158	1,130
Equateur	615	148	763
Kasai Occid.	1,191	151	1,342
Maniema*	557	27	584
Bandundu*	564	66	630
Kasai Oriental*	374	54	428
Total	16,853	3,183	20,036
Percentage	84%	16%	100%

* PSI/ASF does not have any FP activities in these three provinces.

Discussion

The *Ligne Verte* has proven to be an effective low-cost intervention that can be easily replicated on a shoe-string budget in even the most challenging settings. It has also

come to be identified as a particularly effective tool for reaching men and as a first step for remotely managing contraceptive side effects.

Reaching Men

Whatever the reasons for the higher percentage of male callers to the FP hotline, this trend is not unique to the DRC. Data from PSI FP hotlines in Benin and Pakistan have shown that men also make up the majority of callers in these locations as well, accounting for 77% and 78% of all calls, respectively (PSI Research and Metrics Department, 2009). The high percentage of male callers to FP hotlines across three PSI programs may simply indicate that hotlines are an intervention used primarily by men. However, this may also suggest a gendered “digital divide” with regard to cell phones. The highest percentage of calls from women originate in Kinshasa, where women also have the highest socioeconomic indicators (DHS, 2007), and are thus more likely to own cell phones than women in the rest of

the country, and have higher exposure to information from mass media (DHS, 2007). It is possible that the gender imbalance among callers to *Ligne Verte* and other cell phone hotlines will decrease as other development indicators improve.

Many of the calls made by men are on behalf of their partners and concern management of side effects experienced by the female partner, such as spotting or missed periods. This may indicate that men are generally more comfortable calling a hotline, which may also account for the higher proportion of calls from men. Furthermore, the high volume of questions about side effects illustrate the potential of *Ligne Verte* to function as a first response for responding to questions about side effects.

Using the *Ligne Verte* Data

Ligne Verte was not designed as a research tool but its data have nonetheless provided useful information on caller profiles and common FP-related concerns. Data collection and analysis from the *Ligne Verte* has the potential for basic data collection to be expanded and used to evaluate program activities and FP needs in the DRC. This

might include tracking program reach of PSI/ASF interventions (especially outside of intervention zones), improving analysis of questions to determine the most pressing FP knowledge gaps, and evaluating whether PSI/ASF is effectively reaching its intended target group, women of reproductive age.

As the volume of calls is not linked directly to either a province's population size or the size of the *Confiance* network, it is likely that call volume is strongly influenced by other factors. These might include a higher market share for Vodacom in certain regions, better advertising of the hotline in some provinces or a reflection of trends in dissemination of the *Ligne Verte* number beyond *Confiance* implementation areas.

It would be beneficial to know why proportionally more women call from Kinshasa than from any other province or city. This could be for the reasons posited above (more access to money, cell phones, and mass media), but the question bears further investigation. Knowing the factors which influence the gender difference among callers would

also help determine if these are factors PSI/ASF's program can directly address.

Lastly, one of the easiest ways to assess the efficacy of activities to disseminate information about *Ligne Verte* would be to ask callers how they heard about the hotline. This information could aid in targeting promotion of the hotline and measuring effectiveness of program communication activities. It could also provide information on how the *Ligne Verte* number has reached provinces with no PSI/ASF FP activities and without any promotion of the hotline. Unfortunately, the two-minute time limit on calls was not sufficient to ask callers any additional questions without further decreasing the time available to respond to caller's concerns.

Lessons Learned

Men Are the Primary Users of the Hotline

Contrary to assumptions that women would be the primary users of the *Ligne Verte*, the vast majority of callers to the hotline have been men. This may be because they have a higher unmet need for FP information than originally thought. As studies elsewhere have shown, men are less likely than women to seek out health care in traditional settings (Collumbien and Hawkes, 2000), and social norms may limit their attendance at health clinics (Wegner et al, 1998), where the majority of family planning activities are located. The high percentage of male

callers also suggests that men may take a more active role in FP than previously recognized, as evidenced by the frequent calls from men with concerns about their partners' side effects. Alternatively, it may be that men are simply more comfortable making calls to the hotline or that they have greater access to phones. Whatever the reason, it requires that PSI/ASF and other FP programs with hotlines re-evaluate their primary target group and tailor the hotline and other information activities accordingly.

Call Time Should Be Increased Beyond Current Two-Minute Limit

Although test runs for the *Ligne Verte* calls indicated that two minutes per call was adequate for most questions, the mobile educators who staff the hotline have found that this time is often insufficient to respond to many questions. Many callers who need more time will simply call back once the initial call has ended. It is believed that al-

lowing three minutes per call would reduce the need for callers to make more than one call. For the current agreement with VODACOM, however, it is not likely that the call time can be re-negotiated and this is an issue that must be considered for the future contracts.

The Concept of a Hotline Is Not Well-Known in DRC

The concept of a toll-free hotline is not well understood in the DRC. Callers often ask for free phone credit, money, non-health related questions or simply call out of curiosity to find out why the hotline is free. These types of calls indicate that more attention needs to be paid to explaining the unfamiliar

concept of a toll-free hotline and emphasizing that *Ligne Verte* is for FP inquiries. Thus, in order to increase the efficacy of advertising *Ligne Verte*, promotional materials and activities must address both the concept of a toll-free hotline and the FP-specific nature of *Ligne Verte*.

Future Directions for the *Ligne Verte*

When first established, *Ligne Verte* was a bare-bones intervention intended to creatively address the FP information gap and expand program reach by exploiting the growing cell phone industry. As the pilot program for this family planning hotline has proven successful, and as cell phones become more prevalent in DRC, it is necessary to re-evaluate and update *Ligne Verte*.

As the hotline has reached its capacity for receiving calls, PSI/ASF is considering how service might be expanded. Options include extending the hours of operation, increasing the languages available for hotline callers, adding more call-in Vodacom lines and adding another cellular network partner. These options are currently being evaluated to determine the most cost-effective strategy for increasing caller volume.

A trial period of extended hotline hours in December 2008 showed that call levels remain high until 6:30 P.M. on weekdays and are also high on Saturdays. An even higher proportion of men called on Saturdays (comprising 91% of callers vs. an average of 84%), and higher proportions of

women (30% vs. an average of 16%) called in the evenings. Extended hours increased overall call frequency for the month by 20%. While it is not yet feasible to operate *Ligne Verte* outside of PSI/ASF office hours on an ongoing basis, there may be opportunities to do so in the future, either by using cellular phones to receive *Ligne Verte* phone calls or by establishing a call center with a guaranteed electricity supply.

Adding two more widespread local languages, Kikongo and Tshiluba, to the hotline may also increase coverage. However, these two languages are less prevalent than Lingala or Swahili, and the impact of including them may be less than that of simply adding a second phone line.

Lastly, if an additional phone line were to be added to the hotline, the question remains as to whether expanding to another phone company would have a greater impact than adding another Vodacom line, particularly as market share information from the various cell phone providers in DRC is difficult to acquire and is constantly changing.

References

- CIA World Factbook – Congo, Democratic Republic of the. <https://www.cia.gov/library/publications/the-world-factbook/geos/cg.html>. Updated January 15, 2010. Accessed Sept 2, 2009.
- Coghlan, B, Ngoy P, Mulumba F, et al. Mortality in the Democratic Republic of Congo : an on-going crisis. New York: International Rescue Committee, 2007.
- Collumbien, M and Hawkes, S. Missing Men’s Messages: does the reproductive approach respond to men’s sexual health needs? *Culture, Health and Society*. 2000; 2: (1):135-150.
- International Telecommunications Union, External Affairs and Corporate Communications Division. 2008. *ICTs in Africa: Digital divide to digital opportunity*. Available at http://www.itu.int/newsroom/features/ict_africa.html. http://www.itu.int/ITU-D/icteye/Reporting/Show-ReportFrame.aspx?ReportName=/WTI/BasicIndicatorsPublic&RP_intYear=2007&RP_intLanguageID=1
- Kaplan, Warren A. “Can the ubiquitous power of mobile phones be used to improve health outcomes in developing countries?” *Globalization and Health*. 2006; 2:9.
- Kayembe, Patrick K., Alphonsine B. Fatuma, Mala Ali Mapatuano and Therese Mambu. “Prevalence and determinants of the use of modern contraceptive methods in Kinshasa, Democratic Republic of Congo.” *Contraception* 2006: 74 : 400-406.
- Minister of Plan and Macro International. 2008. *Enquete Demographique de Santé de Republique Democratique du Congo 2007* (2007 Demographic and Health Survey - DHS). Calverton, Mayland, U.S.A.
- United Nations Population Division: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, <http://esa.un.org/unpp>, Accessed Feb 2, 2010.
- PSI Research and Metrics Department. Mobile Phone Programs of PSI and Local Partners. Unpublished concept paper. 2009.
- UNICEF. “*MICS2.2001; Enquete Nationale sur la Situation des Enfants et des Femmes. Kinshasa, 2002*”.
- UN-HABITAT; *The State of African Cities 2008: A framework for addressing urban challenges in Africa*. 2008.
- UNFPA; *Country programme document for the Democratic Republic of the Congo*. October 2007.
- Vodafone. Vodafone Policy Paper: Africa: The Impact of Mobile phones. *Vodafone Policy Paper Series*, Number 2 2005.

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