



mHealth Case Study
The journey of Telenor My Health in Pakistan

DECEMBER 2016



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mHealth

mHealth Programme

By forging stronger connections between the mobile and healthcare industries, the GSMA mHealth Programme is supporting commercially sustainable health services that transform the lives of people in need and promote the wellbeing of mothers and families in developing countries. Mobile can increase the quality, reduce the cost and extend the reach of healthcare to benefit millions. mHealth services have the potential to generate significant impact by reaching women and children who lack access to essential healthcare and nutritional information.

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Executive Summary

Telenor My Health is a mobile health (mHealth) service launched by Telenor Pakistan—the second largest mobile network operator (MNO) in Pakistan with more than 39 million subscribers. A health portal with information on general, maternal and child health, as well as wellness and lifestyle topics, the service aims to build customer loyalty for the MNO. Telenor charges users a weekly rate of 3 Pakistani rupees (PKR) plus

PKR 0.585 tax (USD 0.03) to receive daily health alerts via SMS, and PKR 0.10 (USD 0.00096) per minute to access additional content via interactive voice response (IVR). Telenor's value-added services (VAS) vendor, Planet Beyond, is responsible for content creation, aggregation, and marketing of the service. Launched in February 2015, by August 2016 the service had over half a million active subscribers.

Year launched	2015
Business model	Revenue share with VAS vendor
Delivery channel	SMS and IVR
Service design	Subscription-based push text content and pull IVR content
Active number of users	516,000 (August)

Key insights

This case study outlines the key benefits for MNOs to engage in mHealth projects and highlights key considerations for the implementation of mHealth services at scale:

Health VAS increased network loyalty for the MNO.

Telenor's mHealth service has fostered high levels of customer loyalty. The average monthly churn¹ rate for the service between January and July 2016 was 8.2%, compared to 20% of all value-added services in the Telenor portfolio. Fifty percent of users have stayed with the service for longer than eight months, with 34% subscribing for more than a year.

Customer willingness to pay has created a viable commercial model for mHealth services.

By offering a low price point, the service has proven to be commercially viable as it appeals to customers at all average revenue per user (ARPU) levels. This, combined with different content streams, has enabled the service to reach a larger addressable market.

A mix of pull and push content provides value to the user and appeals to a wider audience. Providing content on both SMS and IVR channels has allowed Telenor to reach users at all literacy levels. Users receive

a daily SMS health alert on seasonal, medical, dental and everyday hygiene topics, with an option to receive stage-based pregnancy information. An additional option to access content through the IVR channel is also available, enabling those with lower literacy levels to benefit from the service.

The case of Pakistan illustrates the importance of having an enabling environment to iterate services and improve content.

In Pakistan, mHealth content must be validated by a registered health professional, but does not require approval from a government body such as the Ministry of Health. The possibility to speed up the validation process has allowed Telenor's VAS partner Planet Beyond to continuously create new content and update product offerings for its users.

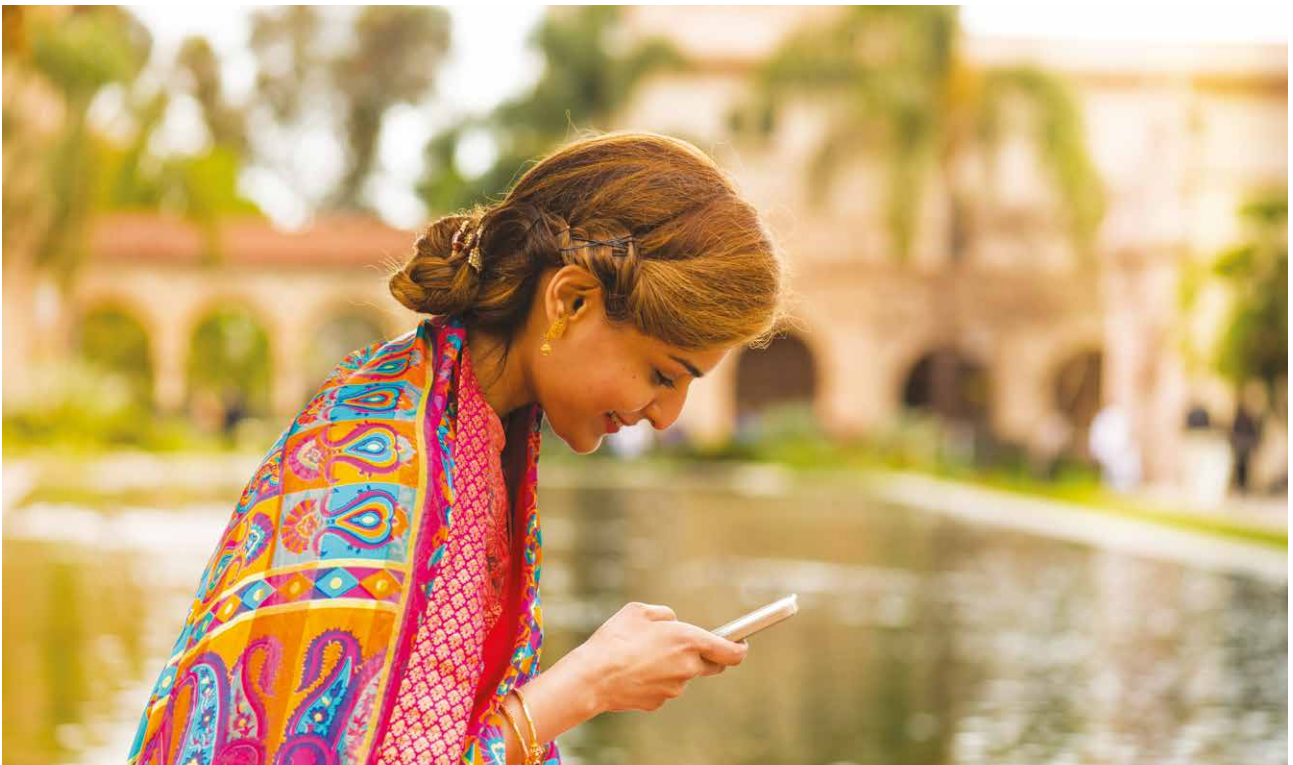
"Live shows" and high levels of responsiveness to user feedback are key to creating a "sticky" service. Every week, Telenor's mHealth service hosts an interactive live show which users can listen to by dialling into an IVR line. These shows, in conjunction with promotional SMS text messages requesting feedback, have been a successful way to collect user feedback and tailor the service to user needs.

1. Churn = total gross disconnections per month as a percentage of average total connections at the end of the period

Introducing Telenor My Health

Telenor My Health was launched nationally at the beginning of 2015 to provide Telenor users with affordable, localised health information on an array of health-related topics. In addition to delivering health content via SMS and IVR, the IVR channel hosts a search tool allowing users to learn more about diseases and locate healthcare providers. The service meets the Telenor group's mandate to help countries reach their health targets through mHealth information services.² It has also become an alternative revenue channel for the MNO. Reaching both urban and rural users with diverse health content, there were 516,704 active subscribers as of August 2016.

One of Telenor's main incentives for launching the service was to increase network usage, which has been an important strategic priority since the passage of more stringent know-your-customer (KYC) regulations in Pakistan. One of these regulations is a limit on the number of SIM cards owned by an individual, limiting the revenue opportunities earned from the sale of SIM cards. By introducing new services such as Telenor My Health, Telenor has been able to drive more traffic to its network and build customer loyalty, which in turn has had an impact on its market share in Pakistan.



2. <https://www.telenor.com/wp-content/uploads/2012/05/BCG-Telenor-Mobile-Health-Report-May-20121.pdf>

Country context

	2010	2016
Rural population ³	63.4%	61.2%
Out-of-pocket expenditure as a % of private expenditure on health ⁴	88.5%	86.8%
Total expenditure on health as a % of gross domestic product (GDP) ⁵	3.0%	2.8%
Number of physicians per 1,000 population ^{6 7 8}	0.8	0.8
Nurses and midwives per 1,000 population ^{9 10}	0.6	0.6
Total market penetration in Q2 ¹¹	63.2 %	70.3%

Health indicators

High out-of-pocket health expenditures are still one of the biggest economic shocks to low-income families relying on daily wages from agricultural and blue collar jobs, and those living in rural areas (61.2% of Pakistan's total population) are impacted the most. However, access to information can lessen this financial burden. Studies have shown that 40% of income in rural households is spent on treating preventable diseases from contaminated water and unsanitary living conditions.¹²

Pakistan is experiencing a drop in the number of physicians working in the health system, which has created a shortage of doctors in a growing population.

This is due in part to a high proportion of doctors leaving the country. Seventy-five percent of qualified, licensed female doctors in Pakistan are also excluded from the workforce due to socio-cultural barriers, exacerbating this shortage.¹³ The presence of Lady Health Workers¹⁴ in communities has been found to have a positive impact on education about maternal and child health, however there are still shortages of nurses and midwives, particularly in remote areas where the resource burden is even higher.

The ubiquity of mobile in Pakistan (71% GSM penetration as of October 2016)¹⁵ provides an important opportunity to reach large segments of

3. <http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS> (2015 data)

4. http://wins.org.pk/resources_files/Sindh%20Health%20Budget%20Analysis%20January%202016.pdf

5. http://wins.org.pk/resources_files/Sindh%20Health%20Budget%20Analysis%20January%202016.pdf

6. <http://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=PK>

7. <http://www.trfpakistan.org/LinkClick.aspx?fileticket=cGyiwxr1xkA%3D&tabid=2618>

8. <https://cdn2.sph.harvard.edu/wp-content/uploads/sites/32/2014/09/HSPH-Pakistan5.pdf> (2014 data)

9. <https://cdn2.sph.harvard.edu/wp-content/uploads/sites/32/2014/09/HSPH-Pakistan5.pdf> (2014 data)

10. <http://data.worldbank.org/indicator/SH.MED.NUMW.P3?locations=PK>

11. Unless specified otherwise, all mobile-related statistics are from GSMA Intelligence.

12. <http://www.sci-int.com/pdf/96204074543--673-679-Saeed.pdf>

13. <http://www.docters.com/bridging-the-gap/>

14. Lady Health Workers are teams of trained women who visit households or work in clinics, spreading awareness of hygiene, immunisation, pre- and post-natal care, nutrition, family planning, and services available at nearby health centres.

15. GSMA Intelligence

the population to improve health indicators. By providing content on healthy behaviours, telemedicine to reach resource-scarce areas, or health financial services, mobile can be leveraged in

the delivery of health services. GSM penetration is forecasted to reach 78.65% of the population by the year 2020, creating an even stronger case for mobile health interventions to reach the underserved.

Competitive environment

In Pakistan, Telenor has the second largest market share with 38.5 million connections representing 27.7% of total connections, whilst Mobilink, after a recent merge with Warid Telecoms, are the market leaders with 51.1 million connections, equivalent to 37.0%. New entrant Zong is also growing at an aggressive

rate after being the first MNO to introduce 4G in Pakistan. In a highly competitive mobile market, social business models like Telenor My Health are becoming increasingly important to achieving core business targets and contributing to key business objectives, such as driving network usage and customer loyalty.



Service design

Users can register for Telenor My Health by dialling the IVR code *345*7764# or by sending a message with the text 'SUB' to 7764. When users register through IVR, they receive a welcome message prompting them to select their preferred language: Urdu or Punjabi. Users are then taken directly to the IVR menu.

If users opt to register via SMS, they receive a welcome message and the option to change the IVR menu to Punjabi (by sending an SMS with the word 'HELP' to 7764). For the SMS channel, Roman Urdu is the default



language option. There have been no reported issues with registration, as the dual channel caters to users at all literacy levels.

Once they are subscribed, users receive a daily SMS 'health alert' with information ranging from seasonal, medical, and dental health to everyday hygiene. Users can also access additional content through the IVR line (7764). Once they dial in, users are presented with the option to access two content streams: Family First and Healthy Lifestyle.



The Family First option includes three subcategories:

FAMILY FIRST		HEALTH ARTICLES Audio articles on a variety of family health topics. There is an option to skip and replay the articles.
		TELENOR MAMTA (MOTHERHOOD) Registration for free additional daily SMSs on mother and child health. To opt in, users must create a profile that provides information on the stage of their pregnancy or age of their child.
		NEAREST DOCTOR AND LABORATORY Information on the nearest doctor or clinic, available for users in Islamabad, Rawalpindi, Lahore, and Karachi.

The Healthy Lifestyle option includes two subcategories:

HEALTHY LIFESTYLE		HEALTH ASSISTANT Audio articles on wellness topics, such as weight loss and healthy eating. As with the health articles in Family First, users can skip and replay articles.
		EAT WELL Information on the caloric value of foods are sent via SMS. Users send an SMS to 7764 with the word 'EAT' and the name of the food (e.g. bread) and then receive information on that food.

After users subscribe, promotional text messages are sent notifying them of the additional content available through the IVR channel:

ADDITIONAL CONTENT		LIVE SHOWS A weekly live radio show on a variety of health topics, accessed through the main IVR line (7764)
		HEALTH SERIAL DRAMA 24 episodes of a fictional health drama, available by dialing 77645



Business model and partnerships

Business model

Telenor My Health is managed by the Digital Services team at Telenor Pakistan and is part of a suite of services based on a social business model,¹⁶ including an education service called 'Telenor Taleem' and a job alerts service called 'Telenor Rozgar'. Both services have seen high rates of adoption, with more than a million users each.

Like other services in Telenor's social business portfolio, Telenor My Health is based primarily on an indirect business benefits model, where the main incentive is to drive customer loyalty and increase network usage. According to Telenor, over 50% of subscribers have been on the service for over eight months and 34% have been subscribed to the service for over a year. From January to July 2016, the average monthly churn rate of the service was 8.2%,

which is considerably lower than the 20% average monthly churn rate of all value-added services in the Telenor portfolio.

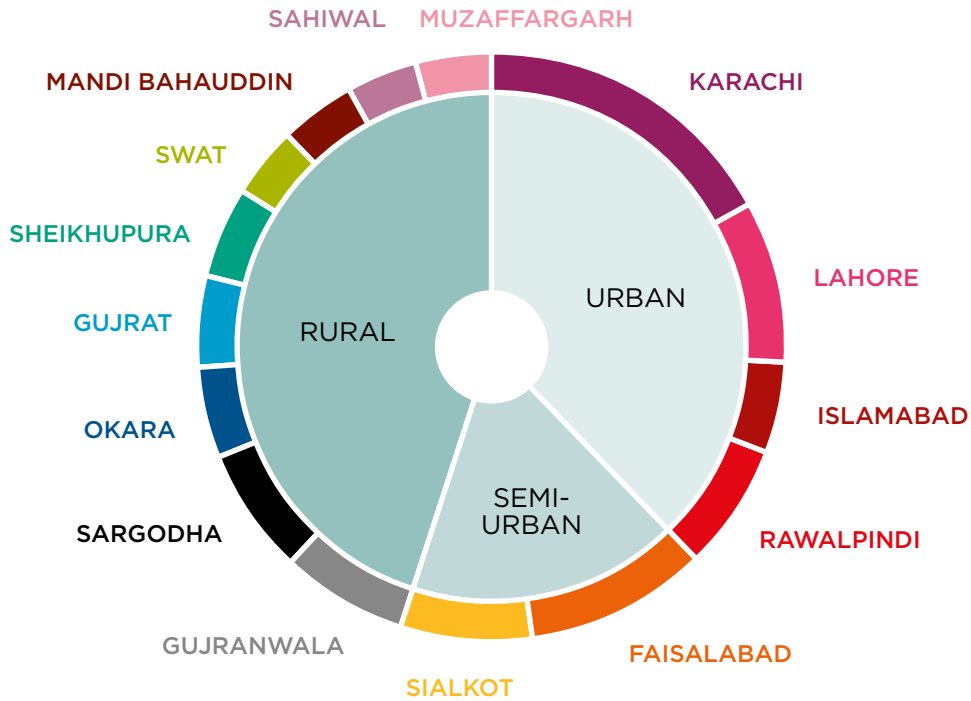
Telenor My Health is a commercially sustainable service and is priced as a weekly bundle of PKR 3+ PKR 0.585 tax (USD 0.03) and IVR calls charged at PKR 0.10 (USD 0.00096) per minute. This makes it one of the most affordable services in Telenor's VAS portfolio. Telenor has been able to attract users from across the country. Some of the highest number of users hail from Karachi, Sialkot and Mandi Bahauddin, which are considered urban, semi-urban and rural districts respectively (see figure 1). There is also high usage in areas with inadequate health coverage such as Muzaffargarh in Southern Punjab, where 64.8% of population live below the poverty line.¹⁷

16. Commercially sustainable services that target a social need or have a social responsibility angle.

17. <http://tribune.com.pk/story/1126706/40-pakistanis-live-poverty/>

FIGURE 1

Districts with the highest number of users



Partnership model

Telenor is responsible for the overall product strategy of Telenor My Health and provides strategic direction and marketing channels (SMS and IVR), with final approval on all service and marketing content. The service is supported by VAS vendor Planet Beyond, which has a revenue share agreement with Telenor. Planet Beyond has a dedicated content team and manages, creates, and produces all SMS and IVR content for the service. By regulation, Pakistan’s Ministry of Health mandates that all health content must be vetted by registered professionals, thus Planet Beyond has established relationships with certified medical professionals who validate all of its content.

Planet Beyond creates all the marketing material for the service. It has invested in its own recording studios, recording artists, and radio jockeys who provide voice-overs for IVR content, live shows and marketing outbound calls. Planet Beyond bears all the costs for content development as this allows it to differentiate its products and have a competitive edge over other vendors. Additionally, content created by Planet Beyond is not exclusive to Telenor My Health after a certain time period, allowing the VAS vendor to provide similar health content to other interested MNOs in the future.



BOX 1

Initial partnership model

When Telenor My Health was first launched, Planet Beyond was assigned the task of identifying suitable content partners and managing these relationships. Planet Beyond entered into a revenue share agreement with health and lifestyle TV channel Health TV,¹⁸ gaining access to all of the channel's archived show material. Planet Beyond then adapted this material to create SMSs on daily health alerts and Telenor Mamta. Video footage was converted into audio and parts of the shows (2–3 minute segments) were used to create one audio article.

Health TV is owned by Ziaudin Group, which controls a large network of clinics and hospitals. Through this partnership, Planet Beyond was able to validate all the content for Telenor My Health and leverage Health TV's database for the "Nearest Doctor" feature.

Feedback from user surveys conducted through outbound calls and Telenor call centres revealed that whilst SMS content was generally accepted, IVR content clips based directly on segments from a TV show did not resonate with users. This ultimately led to the end of the partnership between Planet Beyond and Health TV, and Planet Beyond assumed full responsibility for content creation thereafter.

18. <http://htv.com.pk/about>

Content

During the service inception phase, Telenor gathered feedback on health content preferences by surveying existing users of the mEducation service 'Telenor Taleem' and 'Ask-Telenor', a service that allows users to ask questions and receive a response. This was done based on the assumption that users who subscribe to these services might also be the initial target market. Feedback from users in urban areas revealed an interest in general wellness, while users in rural areas were more interested in prophetic medicine, herbal nutrition, and health information on illness and maternal and child health.

To ensure Telenor My Health appealed to a large addressable market with different literacy levels, Telenor opted to use both SMS and IVR as content delivery channels. SMS health alerts are sent daily in Roman Urdu, a language understood by the majority of the population.¹⁹ IVR targets users with lower literacy levels²⁰ and serves as an infotainment channel for those interested in any of the content streams (e.g. live shows), creating additional value for these users. IVR content is available in both Urdu and Punjabi, the language spoken in the most populous region of Pakistan.²¹

Content streams

Content for My Telenor Health can be classified into four categories: SMS, static IVR, dynamic IVR, and live IVR.

SMS content

Localised SMSs are sent to all users. To reach users more effectively, Planet Beyond's content team creates content in the local vernacular that is simple

and easy to understand. There are two categories of SMS content (see Figure 2). The first category are the daily health alerts with information on seasonal medical, dental and everyday hygiene. The second category are the maternal alerts which provide additional customised information on pregnancy and child health topics (based on user profiles).

19. One survey showed that 37% sent SMS's in Roman Urdu, 17% wrote in English and 15% wrote in Urdu script. <http://www.alnap.org/pool/files/pepl-guide-to-sms-engagement-in-pakistan.pdf>

20. The literacy rate in Pakistan is currently 58 percent.

21. Urdu is the national language of Pakistan and 48% of the population are native Punjabi speakers.

FIGURE 2

Examples of SMSs sent from Telenor My Health



Static IVR content

Through the IVR menu, users can access content clips from the TV broadcaster Health TV, as well as recorded content clips from Planet Beyond. The information is localised and presented in Urdu and Punjabi. Content clips are approximately two minutes long and recorded with voice-overs designed to be engaging for users. Content offered via static IVR includes Family First (information about family health) and Healthy Lifestyle (wellness and lifestyle information).

Live IVR content

Live content is available to users through live weekly shows. Users dial into the IVR line and have the option to join the live show. The show is curated and run by Planet Beyond, which has its own studios and radio jockeys. Each week, a new health topic is discussed and users are given the option to ask questions live on air. Topics such as 'quit smoking' and prophetic medicine²²

have attracted the largest number of callers. Once every quarter, Planet Beyond hosts a health specialist on the show to discuss topics of a more clinical nature, such as pregnancy or non-communicable diseases. The live shows have proven to be successful in creating "stickiness" for the service, transforming health content into infotainment. Live shows have also been added to other Telenor services, such as the mAgri service Kushal Zamindar.

Dynamic IVR content

On the IVR channel users can listen to a 24-episode serial drama that addresses a variety of health topics. Each 15-minute episode is in Urdu and based on the fictional character of an unemployed doctor from a small village who fails to find a job and becomes a taxi driver. Each week the doctor has a new client who faces a particular health issue, and during the course of the taxi ride he provides the passenger with guidance and information.

22. Prophetic medicine: A genre of medical writing advocating traditional medical practices.

Marketing

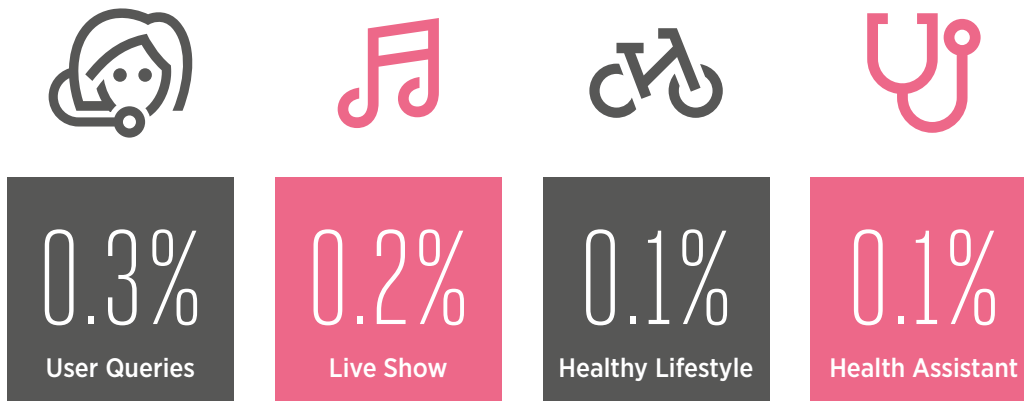
Telenor My Health is promoted solely through below-the line (BTL) marketing activities carried out by Planet Beyond through SMS and outbound calls (OBD).²³ Telenor provides data on user trends (e.g. previous VAS subscriptions) to target potential subscribers. To drive uptake of the service, promotion is segmented by rural and urban users. SMS is used to target the urban segment whilst OBD reaches rural users.

This segmentation is based on network intelligence that allows Telenor to capture potential and current subscribers based on the most-used cell phone tower.²⁴ Although promotional activities were initially conducted in different regional languages, conversion rates were highest with Urdu, so all marketing is

currently conducted in Urdu. Telenor also introduced loyalty incentives, giving all users who activated the service through the Telenor website a 50% discount.

Telenor and Planet Beyond continuously measure the success of its marketing activities and uses this data to refine their approach to target customers more effectively. For the SMS marketing channel, user queries (which allow users to request health content for the service free of charge) have proven to be the best way to drive uptake, and live shows have also proven effective in increasing up subscriptions. Telenor and Planet Beyond have learned that continuous two-way communication through marketing channels helps to keep users engaged and interested in the service.

RESPONSE RATIOS FOR FEATURES ON SMS



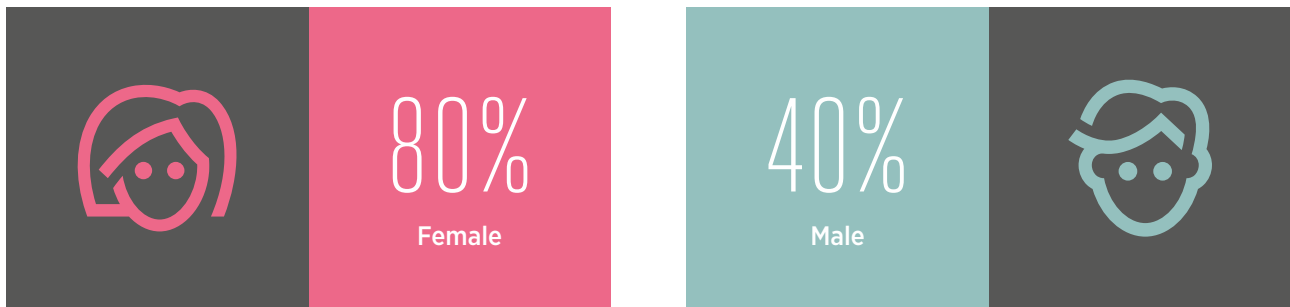
Similarly, OBD calls revealed the most popular features driving activation were live shows and user queries. Family First topics such as maternal alerts have also yielded higher numbers of subscriptions. It was found that female voice-overs had a 50% higher activation rate than male voice-overs for a similar

message, and although this could indicate a general preference for a female voice, it may also be a sign of a larger female user base as, culturally, women are more comfortable discussing sensitive issues such as health with other women.

²³ Outbound calls are pre-recorded voice messages that inform a user about the benefits of a service.

²⁴ Telenor Pakistan uses Data Science and Analytics to boost mAgri uptake: <http://www.gsma.com/mobilefordevelopment/programme/magri/telenor-pakistan-uses-data-science-and-analytics-to-boost-magri-uptake>

RESPONSE TO MALE AND FEMALE VOICES ON OBD CALLS



To retain users, BTL marketing is conducted using SMS for urban areas and OBD for rural areas. These activities mainly inform users of new content available on the platform, a new episode of the drama serial, and the next live show and health topic that will be discussed. The service regularly offers cash prizes to users for answering health questions and calling in to health shows.

Live shows and user queries have played a dual function as Telenor regularly draws on them to collect insights on users' content preferences and refine content to meet user needs. Content is created on the topics that generate the highest number of callers for live shows, as well as the most requested subjects from user queries.

BOX 2

Text messages that have received the highest user conversion rates

- Telenor My Health! Suniye Chicken Pox k baray main zrori batain or janeye iss se Bachao k eham tareka,wo bhi sirf Rs 0.10/min main! Tou abhi 77644 dial karain (Telenor My Health! To learn more about chicken pox and how to avoid it in children for just PKR 0.10 per min, then dial now 77644)*
- Agar ap TAMBAKU NOSHI se Nijaat Pana chahte hain tau suniye, My health per LIVE SHOW or Saath hi Saath Rs.100 FREE Balance Jeetne ka moqa bhi payein! Abhi 7764 milaein. Sirf Rs.3+t haftawar aur Rs. 0.10+t/Min. (If you want to get rid of your tobacco habit, then listen to My Health LIVE SHOW and you can also win PKR 100 FREE balance! Dial 7764 now. Only PKR 3 + tax per week and PKR 0.10+t/ Min)*
- Telenor My Health kay zariye pocheye sehat kay mutalik tamam sawalaat! Tou abhi HELP likh kar reply karain wo bhi MUFT! (Through Telenor My Health, ask any question related to your health! Reply with the word HELP now— for FREE)*

Looking ahead

Monetising content

To drive revenue growth, besides generating revenue directly from users, Telenor could also form partnerships with interested health organisations to leverage their platform for data collection or with organisations that want to disseminate health content that aligns with their service. These would form an additional B2B revenue stream for the service itself whilst concurrently enriching content offerings for the user base.

Mobile financial services

In partnership with MicroEnsure,²⁴ Telenor has piloted an insurance product available to all subscribers of the Telenor My Health service. This bundled product is priced at PKR 50 + PKR 9.75 tax (USD 0.57) per month. The subscriber receives daily health messages, has access to unlimited IVR content, and receives in-patient insurance. For every night a user spends in the hospital, they are reimbursed PKR 1,000. A benefit of bundling content with insurance is that users will still get value from the service even if they are not admitted to hospital, and Telenor can position this value offering as the first of its kind in Pakistan.

Evolution to data

The evolution to rich media is a key strategic priority for Telenor Pakistan. As smartphone penetration increases, Telenor is aiming to increase data usage on the network. A mobile app for Telenor My Health could be created to target urban and semi-urban users and capture the market with the highest smartphone penetration. The service could deliver additional health and lifestyle information, which are the most requested topics from urban and semi-urban users.

25. MicroEnsure is a company that aims to provide microinsurance to the mass market. Its business model typically involves partnering with a mobile network operator to use mobile channels to register users and process and send claims.



For more information on the Mobile for
Development mHealth programme visit:
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