



V I T A L N E T W O R K S

EXTENDING THE AGENCY OF RETURN
MIGRANT HEALTH WORKERS

GENEVA CHALLENGE 2015

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**This document is accompanied by a short film introducing the project. If viewing online, please click the link below. Otherwise if you are viewing this physically, please scan the QR code above to be redirected to the film.*

[VITAL NETWORKS: THE FILM](#)

INTRODUCTION

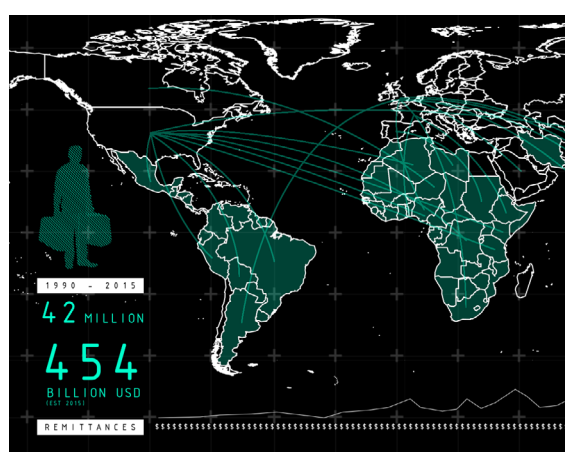
In the 21st century, we increasingly understand our world in terms of flows. People, information, and money are flowing across borders with rising speed and intensity, transforming our world into a networked society. Flows of migrants create multicultural workforces, flows of information let us communicate across vast distances, and flows of money link previously distinct economies together in webs of interdependence. These flows have been

emerging across centuries. However the proliferation of digital technologies has vastly accelerated the growth of international connections. This proposal suggests a solution at the convergence of these flows, in which return migrants are global entrepreneurs capable of capitalizing on flows of money and technology developments in order to support both themselves and their globalized communities.



MONEY

An estimated 454 billion in remittances will flow to developing countries in 2015 (World Bank, 2009). This is more than double the GDP of New Zealand and more than eight times the GDP of Kenya. An important development tool, remittances dwarf aid and foreign investment, and are a principle source of income for many households in the developing world. The International Monetary Fund (IMF) and the World Bank (WB) have long recognised the development power of remittances (World Bank, 2014; Chami and Barajas et al., 2008). Targeted to meet specific needs, remittances are commonly spent within the domestic economy on basic goods, health or education, or are used to finance small business and entrepreneurship. Remittances thus directly support individual capabilities and domestic economic growth. However, there are tensions in the connection between migration, remittances, and development. On a country-level, migration opens new sources of capital while taking skills and labour away from the domestic economy. Brain drain, as this phenomenon is commonly referred to, has long been a concern of development policymakers. Yet formulating effective responses that do not violate the right of migrants to seek a better life abroad has proven challenging. On an individual level, migration opens new opportunities for income, remittances and education, but these benefits can also create relations of dependency and discourage the return of migrants working abroad.



HEALTH

Development theorists such as Amartya Sen, Jeffrey Sachs, and William Easterly agree that health is a foundational requirement for development. Low morbidity, high life expectancy, and freedom from chronic disease are the basic requirements, on an individual level, for a better life. On a countrywide level, basic health is fundamental for a resilient and productive population. Yet disparities in health between the developed and developing world remain formidable. Children born this year in Europe can expect to live to over 80, while those born in Chad, South Africa or Afghanistan will be fortunate to reach their 50th birthday (World Bank, 2015). Sub-Saharan Africa has 24 per cent of the global disease burden – but only 3 per cent of the world's healthcare workers (World Bank, 2015). It is therefore of great concern that countries with some of the poorest health indicators are experiencing a significant and sustained outflow of skilled health workers.

With skills valued in every country of the world, health workers enjoy comparably greater mobility than other migrant groups. The wage for a fully-qualified doctor in Sub-Saharan Africa can be one-tenth of what it is in an OECD country (World Bank, 2015). Multiple studies conducted across the world find that the higher incomes health workers receive abroad is the number one 'pull' factor encouraging migration (National Centre for Biotechnology Information, 2005; World Health Organisation, 2014; Nentwich and Schaller et al., 2014). Demand for health workers is growing in OECD countries. Already, the over 60s population accounts for close to one-fifth of the population in some OECD countries and chronic lifestyle-related diseases are the leading causes of morbidity (World Bank, 2015).

With the pull of demand likely to continue, migrant health workers will keep channelling valuable knowledge into OECD countries and capital into their home communities. However is there an alternative - a way for migrant health workers to also service their own communities without stopping flows of money?

TECHNOLOGY

Telehealth is the parent term used to describe all health innovations and systems utilising ICT technologies to deliver more efficient and long distance health solutions. There are two streams of telehealth. The first, telemedicine, involves direct communication and data transfer between patients and health workers. The second, telecare, refers specifically to the use of telehealth technologies (wirelessly connected heart rate monitors, e-scales, and blood sugar meters) used in the home monitoring of patients with chronic conditions (American Telemedicine Association, 2012). OECD countries are already using telemedicine programs to respond to the growing care needs of ageing populations in a time of budgetary constraint. A WHO review of telemedicine programs found that distance healthcare has great potential to enhance quality of care, via highly personalised and convenient consultations informed by easily accessible complete patient records (World Health Organisation, 2009).

The potential efficiency dividend offered by telemedicine lies in the reality of daily healthcare provision in OECD countries; GPs and nurses in clinics spend the majority of their working time talking with patients, reviewing test results or biometrics, and writing prescriptions and referrals. The expertise of specialists is offered through patient needs-assessments and the design of treatment plans – even surgery can be advised on the basis of photos, medical imaging, and videos.

WHO studies have also revealed that many previous international telemedicine projects have been short-lived, breaking down under the challenges of language barriers, legal restrictions, and a lack of familiarity among health experts about practices in foreign contexts (World Health Organisation, 2009). Telemedicine clearly offers opportunities for better-quality, more efficient healthcare - yet cultural and institutional divisions between patients and health workers prevent effective communication and treatment.

Is there a way to overcome these issues and draw on the potentials of telemedicine to address both developmental challenges and the needs of migrant health workers? Could return migrant health workers offer the next evolution in telemedicine?



OUR CHALLENGE

We aimed to design a scheme that worked within the realities of international health worker migration, while taking advantage of emerging opportunities presented by new technologies. Recognising the pull of money, and the pull of family ties back home, we designed a scheme that makes sense both macro-economically and personally for the migrants involved. We are presenting an ambitious global scheme that can be easily customised to specific contexts.

For this reason, the following outline presents our proposal as a global initiative. This is followed by a case-study of how our scheme would work in the specific context of international health worker migration between Nigeria and the United States (US).



OUR PROPOSAL

VITAL

We propose a global system of international telemedicine that transforms return migrant health workers into conduits of health knowledge and money for the development of their home communities. Vital, the name of our scheme, allows migrant health workers who have practiced in OECD countries to return home and work physically in their own communities while offering a suite of new e-health services to patients back in their host country. Vital health workers are already licensed to practice in their host countries, fluent in the dominant language, and experienced with the host country's healthcare system. Many Vital providers can even continue to care for patients who were on their books in OECD country clinics. While simultaneously earning income from providing Vital services, return migrant health workers can practice in the national health system and use their enhanced capital and experience to establish private practices or teach in medical degree programs. The supplementary income earned from providing Vital services could provide resources and a standard of living comparable to that enjoyed by migrants and their families when they worked abroad. The benefits of the scheme are fourfold:

- Return migrants are able to live with and provide for their families in their home communities during the prime of their working life;
- Domestic economies continue to benefit from a new style of 'domestic remittances';
- Developing country health systems see returns on the investment made in educating health workers;
- Patients in OECD countries receive high-quality, convenient care suited to their changing health needs.

Vital would be established as a social enterprise that creates and implements a software package and associated management system. The software package consists of two Telemedicine applications, one for patients and the other for providers, and the associated management system introduces Vital into the market and governs its functioning and legal status. We have outlined all the components of the Vital scheme in the Components section.

INCENTIVES

Vital recognises the interest of all actors involved in current processes of health worker migration. Instead of trying to change these, Vital builds upon them and better fulfils the objectives of individuals and national governments, in developing and OECD countries.

INCENTIVES FOR MIGRANT HEALTH WORKERS:

In recent years, research from both the WHO and policy makers has investigated the dominant factors encouraging physicians and nurses trained in the developing world to seek long-term work in OECD countries. Of undeniable significance is the higher buying power medical training attracts in OECD countries (Astor, A. and Akhtar T. et al., 2005) and (Nentwich and Schaller et al., 2014). In surveys and interviews, higher incomes out-pace working conditions and domestic security concerns as 'push' factors encouraging migration. Accordingly, studies of prospective return migration suggest that many migrant health workers have a preference to return home after gaining international experience yet are discouraged by insufficient earning opportunities. 70 per cent of surveyed African nurses working in the UK expressed an interest in returning home permanently should their financial situation allow (Astor, A. and Akhtar T. et al., 2005). Studies of migrant nurses from South Africa and Latin America have found that many experience perceived discrimination and suffer from homesickness due to separation from family, particularly children (Agunias, 2006; Allan and Larsen, 2003). Ethnographies of migrant doctors in the US found that physicians rarely sever ties from home and plan to conclude their 'temporary' migration project on retirement (Cross and Gelderblom, ed., 2006, p.31). The ongoing commitment migrant health workers have to development in their home communities is demonstrated by the hospital building projects and return service trips many undertake, commonly supported by professional associations (MANSAG, 2014).

Currently, doctors and nurses who return home for extended periods are often past the prime of their working lives. By allowing migrants to continue working as health professionals in OECD countries

while residing with their families at home, Vital responds to the dominant ‘push’ factor for out-migration—higher income—and the number one ‘pull’ factors for return migration—cultural familiarity and the presence of family. Additionally, by encouraging health worker migrants to return home yet continue their international professional lives, Vital self-selects those migrants most likely to be innovative and entrepreneurial—the group described in Cerase’s classic typology of return migrants as most likely to contribute the skills and capital required for developmental investment in home communities (Cerase, 1967).

We have estimated that a Vital provider who works for an additional 10 hours throughout the week could complete an average of 30 consultations of 20 minutes each. With each consultation charged between US\$10–50, a Vital provider could earn up to an additional US\$46,800 per year. This is over four times the annual wage of a Fellow at a public hospital in Sub-Saharan Africa.

INCENTIVES FOR FUNDERS:

The emigration of health workers from developing countries is an international development concern, notably in Sub-Saharan Africa, where 36 countries suffer chronic shortages of health professionals (WHO, 2014). Mills et al (2011) have conducted an innovative study estimating the lost returns on the government-investment in doctors educated in Sub-Saharan Africa who spend the majority of their careers in western countries. Per migrant, lost investment ranges from US\$ 43, 394 for doctors trained in Ethiopia to US\$ 101, 440 for those trained in Zimbabwe (Mills, Kanter, et al., 2011). Clearly long-term health worker migration has severe financial as well as human costs.

Due to budgetary constraints, efforts to retain health workers have been concentrated towards improving working conditions and professional development opportunities. This approach is encapsulated by the WHO’s ‘Treat, Train, Retain’ policy framework that aims to address health worker shortages by limiting HIV/AIDS infection, increasing training numbers, and creating more supportive and better equipped work environments (World Health Organisation, 2006).

This strategy is designed to be more affordable than increasing health worker salaries. Unfortunately, the power of higher salaries as a ‘pull’ factor for long-term migration means that the efficacy of other incentives to stay will be limited, at least in the short-term. The International Labour Organisation recognises this and thus recommends rapid economic growth as the only effective response to medical brain drain (Wickramasekara, 2002).

Legally restricting the migration of health workers is problematic from a human rights perspective. Yet considering the ‘demand-led’ nature of health worker migration, the WHO has asked member countries to develop codes on the international recruitment of health professionals (World Health Organisation, 2010). The UK code of practice is a set of voluntary principles that asks employers to not actively recruit from developing countries unless a government-to-government agreement is in place (NHS Employers, 2014). There are no such agreements with sub-Saharan Africa yet doctors and nurses from this region continue to make up a quarter of new foreign health workers (Buchan and Dovlo, 2004). The US has no such codes of conduct and remains the top destination country for migrant health workers. Ultimately there is no framework of principles that can reverse the ageing trend in OECD nations that fuels increasing demand for health professionals.

By allowing migrants to simultaneously serve both developing and OECD populations, Vital is an innovative response to the often conflicting needs of home and host countries. Developing countries will benefit from the contribution of experienced health workers; self-selected to be particularly active and committed to building up national health systems and OECD countries will enjoy a net financial benefit from Vital providers as they would work as independent contractors rather than employees. Vital works with, not against, existing migratory trends and places no restrictions on the individual right to seek employment abroad.

Finally, Vital could enhance capacities to collect data relating to health migration and lifestyle disease management. A recurring problem in studies of health worker migration is great ambiguity about the numbers

who actually emigrate or return. Data on rates of return are deduced from ad hoc studies on migrant's intentions. Vital would track return migration automatically by matching the foreign licensing details of Vital providers against their location of current physical practice. Vital data could provide much-needed verification of the results of speculative studies and could assist developing country government to adapt health workers training levels. By collecting patient information, Vital could also track information on sectors of the OECD population potentially outside the mainstream health sector and could provide real-time information on popular and effective treatment programs for lifestyle-related diseases. The automatic generation of these two types of valuable information, simply through its normal functioning, makes Vital a particularly desirable intervention compared to existing telemedicine programs. Ultimately, developing country governments, OECD countries, and migrant worker rights organisations could all benefit from investment in Vital.

INCENTIVES FOR OECD PATIENTS:

By 2050, there will be over 100 million people aged 60+ in the US (United Nations Population Division, 2002). Already, the over 60s population accounts for between 14-21 per cent of OECD populations (World Bank, 2015). Elderly patients require regular support to assist independent living and to reduce vulnerability to lifestyle related diseases, especially Cardio Vascular Disease, the number one cause of mortality in OECD countries. Even outside the elderly population, rates of CVD are increasing, driven by rising rates of obesity amongst European and US populations. Chronic lifestyle related diseases are exacerbated by a complex network of factors and current health systems are unable to offer the ongoing monitoring that many patients require – notwithstanding the individual financial burden frequent visits to the doctor places on US patients.

With Vital, patients with age or lifestyle related problems could receive continuous care from trained health professionals familiar with their cultural context. Contact with Vital providers could be frequent yet affordable as treatment could be offered through short consultations and regular updates to exercise

or diet plans, based on data from home monitoring devices. Neither intervention would require large time investments from Vital providers. The affordability of contact with Vital providers means that patients requiring emotional support rather than direct health advice could also be catered for.

Working patients requiring regular prescriptions, medical certificates, or periodic check-ups could consult with Vital providers from the comfort and convenience of their own home or workplace. Even in European countries with free GP services, the cost of a Vital consultation would be covered by the gain in work or leisure time to patients and employers. For this reason, employers could benefit from Vital subscriptions; covering the cost of routine Vital consultations for their staff and avoiding lost work time.

Vital surpasses existing telemedicine programs in its comprehensiveness, low cost, and high quality of personalised care. While other interventions cater to a single health need (for example daily reminders to take medication, biometric monitoring, or an emergency health hotline), Vital covers the full suite of synchronous and asynchronous telemedicine services. The structure of the program as a form of additional income for health workers in a low-income country means that the cost-per-service offered by Vital can be lower than the cost for services provided domestically. The ability of Vital to tap into existing health records integrates the service with physical healthcare to a higher degree than other telemedicine services, while the brand of Vital—its focus on accessible and flexible healthcare—consciously orientates the provision of services towards the convenience of the patient. Finally, while existing telemedicine interfaces developed by government health authorities can appear sterile and confusing to use, Vital applications are intuitive and personalised. It is an IT experience of the highest quality.

COMPONENTS

The scheme consists of a software package and associated management system. The software package is composed of two applications—one for patients and one for providers—with a highly-secure communications interface, real-time calendar for booking appointments, and an encrypted email network for transferring referral letters, prescriptions, and test results. The web-based and mobile-friendly application that enables the scheme will be made easily accessible through a user-friendly interface and clear messaging that appeals to both health workers and patients, as well as partnering institutions.

HOW DOES A HEALTH WORKER SIGN UP TO THE VITAL SCHEME?

Migrant health workers in OECD countries can request registration as Vital providers online and submit the details of their current license to practice and work history, as well as two professional references. When accessing the web portal for the first time, they will be requested to give their provider number and ID documents. Vital checks these details with state or national medical licensing boards and verifies references. Once the appropriate licensing board has

verified the information, the social enterprise sends a unique, single-use download code to health workers who can then access the provider version of the software and install it on their own mobile phones, tablets, and computers. The provider application links to existing cloud-based electronic medical records systems.

The application allows providers to manage appointment calendars and price schedules, hold consultations and give prescriptions, and communicate with other health experts in OECD countries. Once the health worker has registered, they will be able to choose patients on the scheme who they treated previously or new patients that could benefit from their expertise. On their Vital profile, providers will have a calendar with the times and days they have decided to work, which will be regularly updated in response to patient appointments. They will be evaluated on their performance on a bimonthly basis by the Vital Social Enterprise team using quantitative and qualitative indicators based on internally generated data on patient satisfaction, as well as reviews every 2-5 years by the medical licensing boards. In advance of medical license renewal, Vital will provide reminders and guidelines on how health workers can report their practice through the Vital scheme to the licensing board in a timely and appropriate manner.

The screenshot shows a web browser window with the URL <https://www.vital.org/providerregistration>. The page has a dark blue header with navigation links: HOME, THE SCHEME, TESTIMONIALS, REGISTER, and SIGN IN. The main content area is divided into two sections. On the left, there is a large white circular logo containing a stylized 'V' shape, with the text 'VITAL PROVIDER' below it. On the right, there is a 'PROVDER REGISTRATION' form. The form includes three input fields: 'NAME: Dr Esther Okonjo' (with a checkmark icon), 'PROVIDER NO: *****L' (with a checkmark icon), and 'DOCUMENT UPLOAD: passport.pdf' (with a progress indicator at 53% and a close icon). Below the upload field is a large upward-pointing arrow icon with the text 'UPLOAD ANOTHER DOCUMENT' underneath. At the bottom of the form is a 'SUBMIT' button. A small note at the bottom of the upload section reads: 'Please attach one digital Passport size photo, a copy of your Passport and one other ID document. For a list of acceptable ID documents please click [here](#)'.

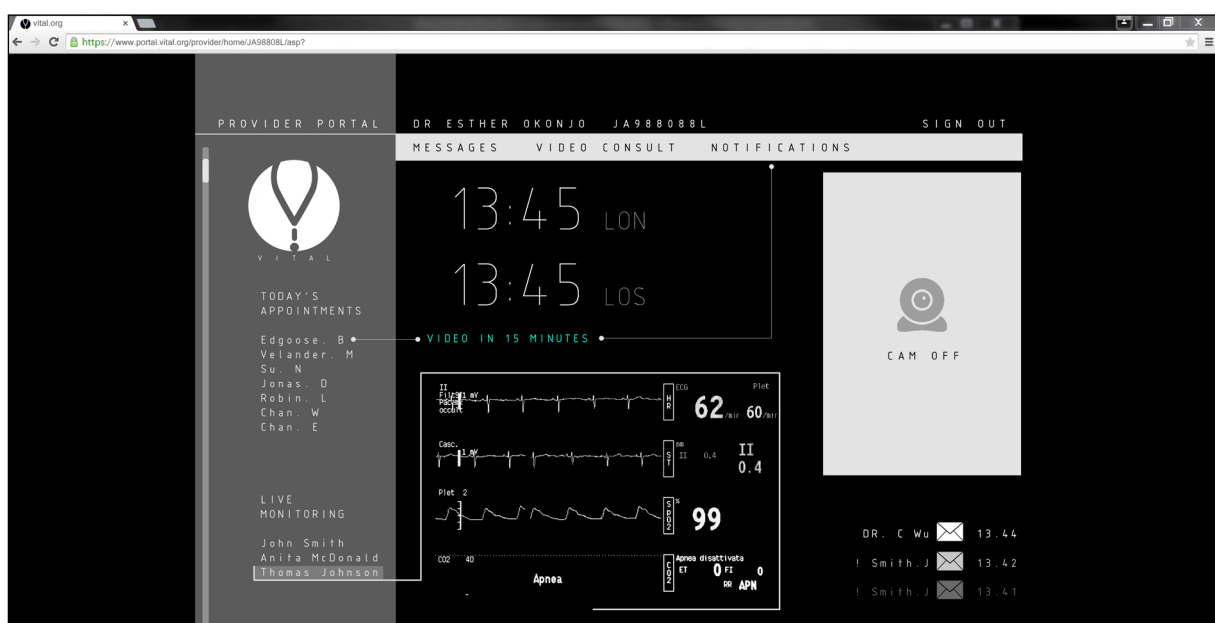
HOW DOES A PATIENT SIGN UP TO THE VITAL SCHEME?

Patients access the scheme via a free (or very low cost) download of the application for smartphones/tablets and personal computers. On sign-up to Vital, patients agree to allow Vital providers to access their existing medical histories.

The patient application then links to wireless or USB-equipped home monitoring devices and stores this


information within existing histories, allowing it to be accessed by Vital providers. Patients have access to a simplified history of health events to track their own progress. They will also be asked to provide credit card or bank account information through Braintree Payments. All of the information the patient provides will be saved on an encrypted server that only the patient and their selected Vital health worker will be able to access.

The screenshot shows the Vital Patient Registration page. On the left is a large circular logo with a white 'V' shape inside a black circle, with the word 'VITAL' above 'USER'. The right side contains a registration form with fields for 'NAME: John Smith' and 'CURRENT GP: Dr Esther Okonjo', both marked with checkmarks. Below these is a 'TERMS AND CONDITIONS' section with a small 'x' icon. At the bottom right is a 'NEXT' button and a checkbox for 'I accept the Terms and Conditions'. The page is labeled 'page 1 of 3'.




Once this information is provided, the patient will be able to select a Vital health worker, either by giving the provider number of a health worker that they have worked with in-person previously or by browsing through health worker profiles on the application. A simple search tool allows the patient to easily identify the health worker with the most suitable expertise to manage their condition. The chosen Vital health worker will be able to access the patient's information using the unique code generated for each patient's account.


To start a consultation, the patient signs up for a timeslot on the timetable on the app, showing the available times of their chosen health worker. When the patient signs up for a time slot, they simply provide their unique code and a comment box in which they can write the purpose for the consultation. Once the health worker has approved the suggested appointment, which needs to be done within 24 hours, the time slot will show up on the personalized timetable on the patient's account. Routine appointments can also be scheduled, and reminders of appointments will be sent out as alerts on the devices of the patient and the health worker 48 hours, 24 hours, and one hour before the appointment is scheduled to begin.



PRACTITIONER PROFILES



KEITA NURSING GROUP




DR ESTHER OKONJO

CONSULTATION TIMES
1300 TO 1500
MON TO FRI


I am a Doctor trained in New York, and worked in the US for 7 years between 2007 and 2014. I have both experience in aged care and chronic disease.

MAKE APPOINTMENT


SEND MESSAGE




DR KWAME TESSO



MR JAMES KOSSI



MAKE APPOINTMENT



DR ESTHER OKONJO

CONSULTATION TIMES
1300 TO 1500
MON TO FRI

MON	1315	1330	1345	1400	1415	1430	1445	1500
TUE	1315	1330	1345	1400	1415	1430	1445	1500
WED	1315	1330	1345	1400	1415	1430	1445	1500
THU	1315	1330	1345	1400	1415	1430	1445	1500
FRI	1315	1330	1345	1400	1415	1430	1445	1500

leave a message...

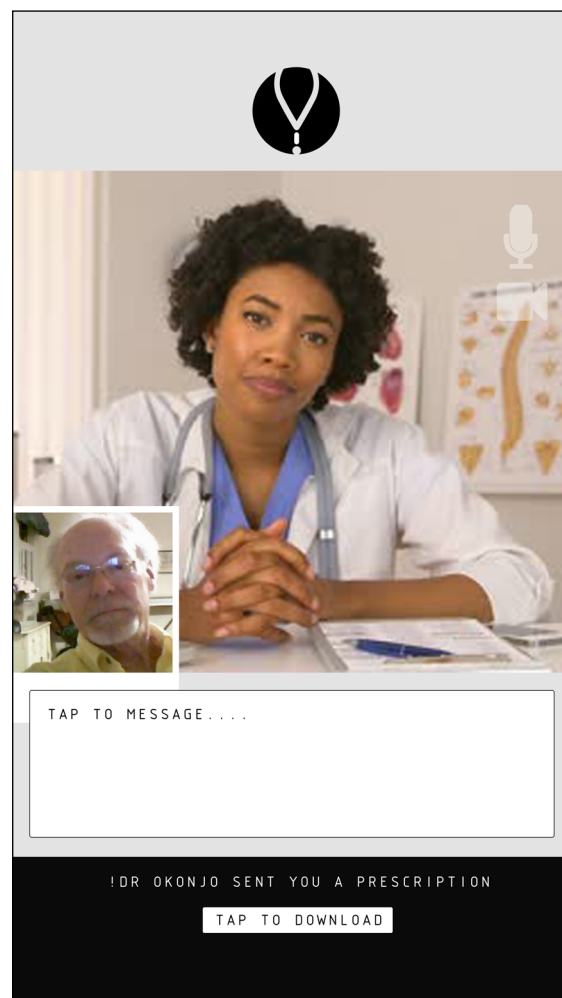
ENTER YOUR 6 DIGIT VERIFICATION CODE TO BOOK

* * * * *

WHAT MIGHT HAPPEN DURING A CONSULTATION?

The e-consultation will transpire similarly to an in-person consultation, with the exception that the patient and the doctor or nurse will communicate via video or audio. The patient will be asked to explain their symptoms and conditions, while the health worker will be able to survey the most recent updates from the patient's monitoring devices. In case something in particular needs to be shown to the health worker, the patient can do so via video or by using the instant photo-sharing mechanism on the app. The health worker can prescribe or renew prescriptions for medication and provide directions to the patient's nearest pharmacy, easily transferred via the application. Alternatively, the health worker could suggest further tests that need to be done, and give information on potential costs as well as arrange an appointment at the patient's nearest hospital or clinic, even calling the hospital or clinic ahead of time to brief them on the patient.

In the case of a slow connection due to weak internet connection—a common problem in developing countries—the application enables in-built photo-sharing and provides the option to only use audio instead of having a video consultation. In the case of power outage during the consultation, the patient immediately receives their money back, as well as an automated message explaining the situation. The health worker will be requested to immediately transfer to a hospital or health clinic equipped with an emergency generator to continue the consultation, and the patient will have the option of either waiting or rebooking the appointment at the next available time and date.



HOW IS A CONSULTATION PAID FOR?

After the consultation, the patient will be given an optional questionnaire on their experience, which will contribute to the anonymous rating that appears on that health worker's Vital profile. The questionnaire also provides data for the reviews by Vital social enterprise team and licensing boards. The anonymous rating system will provide incentive for health workers to provide better services in order to gain new patients, and patients will be able to more easily find the health worker best suited for their needs.

OPTIONAL EVALUATION OF THE CONSULTATION

After the consultation, the patient will be given an optional questionnaire on their experience, which will contribute to the anonymous rating that appears on that health worker's Vital profile. The questionnaire also provides data for the reviews by Vital social enterprise team and licensing boards. The anonymous rating system will provide incentive for health workers to provide better services in order to gain new patients, and patients will be able to more easily find the health worker best suited for their needs.

24/7 ADVICE SERVICE

A 24/7 advice service is available for patients to access health expertise at any time, especially in emergencies. Providers can sign-up for shifts on the 24/7 advice line, which are allocated by Vital staff to ensure a range of qualified experts are available at all times to patients in any one OECD country. The Vital system can also link directly to hospitals and clinics in OECD countries so providers can call ahead and prep staff about patients who have used the 24/7 advice line and been told to seek physical treatment. This would expedite admissions to Accident and Emergency departments and ensure greater continuity of care.



V I T A L H O M E

W E L C O M E J O H N !



YOUR APPOINTMENTS



PRACTITIONER PROFILES



MESSAGES



YOUR PROFILE



EMERGENCY ADVICE



E M E R G E N C Y
A D V I C E

YOUR MESSAGE HERE...

I HAVE BEEN VOMITING
BLOOD FOR THE LAST 2
HOURS. WHAT SHOULD I
DO?

-ME

HEAD TO ER ON GOODGE
STREET - DRINK SOME
WATER IF YOU CAN AND
KEEP CALM. I HAVE
NOTIFIED THE STAFF
THERE TO EXPECT YOU
IN 10 MINUTES. HERE
IS A MAP IF YOU NEED.
KEEP IN CONTACT WITH
ME UNTIL YOU GET
THERE!

- NURSE
MICHAEL DJITU
LAGOS

NEW MESSAGE

BACK

QUALITY CONTROL

To ensure economic efficiency, the scheme would be implemented by a social enterprise, in partnership with medical licensing boards and government health departments.

The quality of healthcare offered by Vital providers is controlled both through periodic license reviews and continuous reviewing by Vital patients. Patient reviews of health workers will be verified and managed by Vital staff. Vital could also partner with retailers of home monitoring devices on the basis that the Vital application transforms home monitoring devices from simple health tools into a comprehensive health management strategy.

As well as verifying license details on registration as a Vital provider, medical licensing boards would conduct the periodic licensing reviews that all health professionals need to undergo to retain the right to practice in OECD countries. These reviews occur on average every 2-5 years, depending on the country of the licensing board, and necessitate the health worker to demonstrate their on-going ability to provide best-practice care. Best-practice care includes familiarity with recent developments in the relevant health field and continuous skills development. In order to fulfil these requirements, health workers need to continuously provide physical health services in their own communities as well as Vital e-health services.

The health departments of developing countries have a vested interest in ensuring that return migrant health workers service their own communities. As an additional check that this is occurring, health departments could cover a portion of Vital's running costs in return for Vital building into its quality control system the requirement that providers offer a specific ratio of physical to e-health services. This ratio would be dependent upon the speciality of the provider. It could necessitate that services are provided in public as well as private health facilities, or that providers spend a period of time teaching for national medical courses.

It is widely recognised that Official Development Assistance provided by OECD countries is commonly shaped by prevailing national objectives, including domestic policy considerations (Wamerdam and de Haan, 2011). Developing country governments could therefore negotiate with donors to cover their Vital funding commitment as a means to both enhance the quality of healthcare in the developing world and in their own countries.

POTENTIAL PARTNERS AND SPONSORS

Partners

- Medical Licensing boards;
- National health agencies, such as National Institutes of Health (USA), National Health Service (UK), and the Federal Ministry of Health (Nigeria);
- Privately owned clinics and hospitals;
- Private companies producing health monitoring devices.

Sponsors

- International organizations such as OECD, WHO, and IOM;
- International development agencies such as USAID and DFID;
- Relevant associations of medical professionals and/or migrants;
- Telecommunications providers.

PUBLIC RELATIONS

In order to raise awareness about the Vital scheme and build a basis of health workers and patients, we will establish an extensive network of representatives, both in host OECD countries and in health worker's countries of origin. These representatives will arrange and conduct in-person presentations at various clinics to generate awareness about the scheme and instruct interested health workers on how to sign up. The representatives will be recruited as volunteers at various universities and in retirement communities, in order to cover a broader demographic. They will be offered discounted rates for their first five consultations as financial incentive.

The Vital social enterprise will organize promotional material in the form of a series of videos that will be aimed at health workers and patients respectively. These videos will outline the scheme from the point of view of the relevant individual, through engaging graphics and voice-over in an appropriate language and dialect to increase familiarity and comfort with the scheme. Vital will also design Posters and pamphlets utilizing graphics that are in the videos. These posters and pamphlets will be offered as a free download online, as well as handed out in physical copies at relevant forums and conferences, so that they can be posted or distributed in clinics, hospitals, and medical schools across the world. The materials will also be distributed via email, LinkedIn, Twitter, and YouTube.

The Public Relations strategy for implementing the application will be rolled out in a three-step process according to target groups.

STEP 1: APPROVAL FROM RELEVANT INSTITUTIONS

In the initial stages of launching Vital, the social enterprise team will need to build robust relationships with relevant medical licensing boards and national health systems, in order to enable health workers and patients to legally and legitimately sign up for the scheme. This will be done by reaching out via emails, distributing advertising materials at forums and conferences, and providing in-person presentations on

the function of the scheme. Once those relationships have been put in place they will be formalized through a mutually agreed-upon Terms of Reference, which will work as a legally binding contract.

Once the application has been developed, a review panel will be organized with regulatory bodies to ensure that it complies with standards and that once it is running, the health workers will be reviewed and paid according to the standards laid out between the Vital Social Enterprise and the institutions participating in the review panel. Most of these institutions will originate from OECD countries, as Vital Social Enterprise will be based in the US, and will therefore be under US legal jurisdiction.

Ideally, upon formalizing a professional relationship with relevant medical licensing boards, medical associations, regulatory bodies, and national healthcare agencies, Vital will be able to utilize the networks and rosters associated with these institutions and organizations.

STEP 2: SPREAD THE WORD AMONG HEALTH WORKERS

The second phase of the initial implementation of Vital will directly target health workers. Vital representatives who have been trained in how the Vital application works will provide brief in-person demonstrations at clinics in OECD countries. Representatives will also present or be in attendance at relevant medical fairs and conferences in both participating OECD countries and the countries of origin of most migrant health workers. Representatives will also participate in university careers fairs in the country of origin of migrant health workers so as to expose medical students preparing to work abroad to Vital as an option allowing them to return home after a number of years. Finally, health workers will also learn about Vital through the mention of it in newsletters for relevant medical associations. The PR strategy outlined above also enables incidental exposure to Vital, through online search engines, promotional material in hospitals and clinics, and private exchanges with professional connections.

STEP 3: ENCOURAGE PATIENTS TO SIGN UP

Individual patients find out about the scheme in a

similar fashion to the health workers— through demos given by representatives and promotional material distributed both physically and online. Representatives will initially target retirement villages, senior citizen associations, local government councils, and private companies. Once representatives have been invited to provide a demo, they will show the video targeted to the patients, walk the potential patients through the scheme, be prepared to respond to their concerns, and reassure them about the legitimacy and benefits of telemedicine using clearly presented empirical evidence. Finally, Vital will seek to gain exposure by being a featured initiative in business and/or health journals.

BRANDING THE APPLICATION

The brand name “Vital” was selected to reflect the valuable and life-generating impact for everyone involved in the scheme—from the health workers and their home communities to the patients and the support systems they rely on. In that sense, our use of the term draws on two proactive processes of the scheme—value-creation and life-sustainment. Vital does not create value in itself, but rather reinforces the value provided by the expertise of the health workers. In the process, return migrants have a source of empowerment that sustains their medical practice not only practically, but also morally and mentally, as they undergo the challenges of reintegrating into their home communities. Vital as a value-creation tool is also relevant to the patients it will treat, as it takes patient wellbeing seriously and puts the patient’s health and comfort first. Vital adds value to their lives by allowing them more flexibility in life to do things they would like to do, rather than sit for hours in medical waiting rooms. The associated noun “vitality” bears added meaning for patients dealing with old age and chronic diseases. At its heart, ‘vital’ denotes the life-sustaining results of dedicated healthcare. It expresses the potential lying in our blood-pumping bodies, a potential that the Vital scheme captures in enabling return migrant health workers to continue their work abroad while giving back to their home communities, and by enabling patients to reliably and comfortably have their “vital signs” carefully and regularly attended to.



C A S E S T U D Y S P E C U L A T I O N

N I G E R I A A N D T H E U S

We have chosen to speculate on the delivery of the global Vital scheme as a partnership between Nigeria and the US. Nigeria is the most populous country in Africa, with a pronounced need for expanded domestic healthcare capabilities. With increased health targeting under the MDGs, Nigeria's health indicators have improved. Yet the maternal mortality rate remains among the highest in the world at 560:100,000 live births, and the child mortality rate is 124:1,000 live births (Countdown to 2015, 2014, p. 148 – 149). There is great regional disparity in access to healthcare, with the well-equipped and staffed university and federal research hospitals concentrated in the South and West of the country and exclusively in urban areas. Private health clinics cluster around national health facilities, as the two commonly share staff and equipment. The average doctor-to-patient ratio is 13:100,000 and the nurse-to-patient ratio 92:100,000 – however in rural areas, it is half this rate and attrition rates are twice as high (Uneke, Ogbonna, et al., 2007). Nigeria is also a major source country for migrant health workers to OECD countries, with 11 per cent of physicians and 12 per cent of nurses trained in Nigeria migrating abroad. The number one destination country is the US (World Bank, 2011). 64 per cent of Nigerian doctors specialise in primary care and close to 70 per cent work in clinics. This means that the consultation and treatment duties they are undertaking involve intensive patient communication and data evaluation as opposed to surgical procedures (Foundation for Advancement of International Medical Education and Research, 2013).

Nigeria receives the highest level of remittances of any Sub-Saharan Africa country – over US\$ 20.6 billion in 2012, three times more than ODA or portfolio investment (World Bank, 2014). The value of remittances to the domestic economy plays a significant role in sustaining the laissez-faire attitude to skilled migration adopted since independence. Nigeria has in fact resisted the WHO push to sign agreements with OECD countries limiting the recruitment of trained health professionals. There is clearly a perceived tension between the economic benefits of remittance flows and the social benefits of increased retention health professionals. Vital could help alleviate this – while also improving access to quality healthcare in the US.

The US is one of the few industrialised nations in the world that does not guarantee access to healthcare for its population. In 2010 the national census revealed that over 26 per cent of the population was uninsured. One quarter of all senior citizens declaring bankruptcy attribute this to medical expenses (Kelley, McGarry, et al., 2012, p. 304 – 309). For uninsured patients, a regular consultation ranges from US\$150-200 and for patients insured under their employer, there is a co-payment of US\$10-50. Vital e-health services would compare competitively with the rates for insured patients – thus decreasing the amounts paid by all patients and increasing the amount paid per consultation to providers.



VITAL NARRATIVES

DR ESTHER OKONJO graduated six years ago from the University of Ibadan. After finishing her residency programme in New York, Esther has worked for the past year in a private clinic. Now married and wanting to start a family, Esther is hoping to move back to her home in Ituku, where her mother lives. On the basis of her international experience, Esther has been offered a position at the University of Nigeria teaching hospital, as a fellow in obstetrics. She hopes to save sufficient money to one day open her own clinic – however she's concerned that her projected wage in Nigeria is equivalent to only US\$10,000 par annum.

Esther finds the Vital web page via a Google search. Interested, she calculates her projected earnings and expenses in Ituku against those in New York. As a primary care physician, Esther is familiar with the chronic lifestyle and age related diseases that affect her patients in New York. Training as an obstetrics fellow also means she will be able to offer Vital pre-natal support services. Esther calculates that if she works for an additional 2 hours from Monday-Friday, she could see up to 30 private patients. With each paying US\$10-50 for her services, Esther could make over US\$40,000 per year. This would give her an annual wage of approximately US\$50,000.

Esther calculates that the relatively low cost of living in Nigeria means that each year, simply by performing a moderate amount of Vital consultations per week and working in the Nigeria national health system, Esther could be up to \$800 better off in Ituku than in New York. Additionally, the start-up costs for a private clinic are lower in Nigeria than in the US so with her savings, Esther could achieve her professional goals sooner than if she stayed in the US.

On returning to Nigeria, Esther completes her provider profile with details of her obstetrics fellowship in Ituku. Esther lists herself as a Vital pre-natal services provider and soon, as well as consultations with old patients, Esther begins to receive request from new Vital patients interested in pre-natal advice. When her baby is born, Esther is able to continue working as a Vital provider from home.

Monthly living costs in US\$ (Esther + Husband + baby)

Nigeria

Two bedroom apartment - 500

Utilities – 70

Food (for 3 people)– 300

Transportation – 50

Childcare – 0 (Esther's mother will help with the baby)

Total – 920

Total per year – 11,040

Total savings from income – 38,960

New York

Two bedroom apartment – 2100

Utilities – 200

Food – 500

Transportation – 120

Childcare – 1,800

Total - 4,720

Total per year – 56,640

Total savings from income – 33,360

VITAL NARRATIVES

THOMAS JOHNSON is a semi-retired management consultant in Washington, DC. Now in his late 60s, Thomas is concerned about his rising blood pressure and cholesterol levels – key risk factors for CVD. As part of his retirement package, Thomas was offered continuing hospital insurance however he is no longer covered for regular physician visits. Thomas saw an advertisement for Vital services in an industry newsletter and calculated that Vital offers more affordable and regular care than a physical physician in the city. Thomas is taking medication to regulate his cholesterol levels and needs a review and repeat prescription every three months. Visiting the doctor so regularly as an effectively uninsured patient is expensive, and, still a busy man, Thomas would prefer to not have to give up an entire afternoon every 12 weeks to sit around in a waiting room.

Thomas downloads the Vital patient application onto his tablet and smartphone. He signs up for the service, agreeing via the terms and conditions to allow Vital practitioners access to his medical records, which are stored on a cloud-based system utilised by his health insurer. To help keep track of his health, Thomas has purchased a set of e-scales and a wirelessly connected blood pressure monitor, each retailing for US\$20. Thomas browses Vital practitioner profiles and books an appointment with a doctor who spent five years working in a clinic close to where Thomas currently lives. He arranges his first consultation for after business hours on a Thursday. During the consultation, Thomas uses the scales and blood pressure monitor and the data is transmitted automatically to his Vital provider. Thomas discusses his health history, eating and exercise habits, and agrees to a new treatment program of cardio exercise and a low-sodium diet.

Every two weeks, Thomas receives a short email from his Vital provider, checking on how his treatment plan is progressing. Every month, Thomas uses the e-scales and blood pressure monitor and the information is loaded into his health history and reviewed by his Vital provider. If there are any concerning changes, these will be noticed immediately and the Vital provider will contact Thomas. To renew his prescriptions, Thomas schedules a quick consultation with his provider – often for early in the morning so they can talk as Thomas walks to his office.

VITAL NARRATIVES

ROSE SOLARIN trained as a general practice nurse in Lagos but has spent most of the decade since her graduation working in the Accident and Emergency department of a public hospital in Chicago. Rose always thought of her time in America as ‘temporary’ and wishes to one day go home – however the money she sends home to her family is supporting her sister at school. A member of the Nigerian Medical Association, Rose one day sees a Vital advertisement in an association newsletter. Rose is confident her diverse experience would be put to good use on the Vital emergency advice line. Dealing with a wide range of patients means Rose is familiar with current medication and treatment plans for common illnesses.

Rose submits an online Vital application form with her licensing details for practice in Illinois, references from her last two places of work, and identity documents. One week later she receives an email from Vital saying her details have been approved and providing her with a code to download a copy of the Vital provider app onto her smartphone.

Even while taking a holiday with her family in their village, Rose is able to continue to provide ‘remittances’ for her sister’s schooling and comfortably supports herself when she moves back to Lagos to look for a job there.

ANITA MCDONALD and her 6-month old baby Max live in rural Kentucky, 40-minutes drive from the closest Accident and Emergency centre. As a new mum, Anita is sometimes uncertain about what to expect from the little illnesses her baby sometimes comes down with. Last month, Max spent a day crying constantly, with a slight fever. Uncertain about whether to make the trip to the hospital, Anita got out the Vital information brochure she picked up after giving birth, and logged onto the website. Once online, Anita was able to immediately have a free five-minute video chat with a Vital nurse, who reassured Anita that Max’s condition wasn’t serious and could be treated with infant paracetamol. After Max’s fever calmed down, Anita registered for Vital service and

paid \$15 for a scheduled consultation with the same nurse, who checked on Max’s progress and talked Anita through the symptoms she should look out for that could indicate more serious illness.

Considering the cost of driving to the hospital and back again and having to wait for hours in Emergency, Anita thought paying a small amount for immediate assistance in her own home was money very well spent!

MICHAEL KEITA is soon to graduate from medical school in Abuja. One day at the end of a lecture, a Vital representative gives a presentation about the opportunity Vital provides to gain international experience and then return home while continuing to earn a comfortable income. Michael wants to be a doctor because he is passionate about helping people – but he has long felt discouraged by the low pay for Nigerian doctors. After hearing about Vital, Michael is pleased that seeking a higher income abroad doesn’t have to come at the expense of giving back to his community.

REPLICATION

OTHER OECD & DEVELOPING COUNTRIES

Vital necessarily works on a bilateral basis since it is contingent on health workers who participate in the scheme working with patients who are based in the countries in which the health workers previously practiced. However, developing countries have migrant health workers returning from a number of OECD countries. Therefore, the Vital Scheme is intentionally flexible in order to be easily modified to suit bilateral relationships between various OECD-developing country partnerships that may have different requirements in regards to telemedicine services. Vital social enterprise, although based in the USA, will be able to work on an international basis by facilitating bilateral relationships with other OECD countries, through a strong international professional network in the health care industry and a reputation for reliability and service-mindedness.

There are two ways in which the Vital scheme can be scaled to operate in multiple OECD and developing countries. Firstly, existing Vital partnerships, such as between Nigeria and the US, could be scaled for other OECD host countries, for example the UK. Vital can easily be adjusted to service the more publicly supported health system in the UK by directly partnering with the National Health Service (NHS) to offer these services.

The NHS already utilizes teleconsultations and several other methods of telemedicine, and holds agreements with certain out-of-country providers to provide these telemedicine services. With the right permissions, and a slightly adjusted payment scheme, Nigerian health workers returning from the UK could also join those returning from the US in taking advantage of the Vital scheme's benefits.

Secondly, as a global model, Vital is designed to facilitate a wide range of bilateral connections – between South Africa and the UK for example. South Africa provides more doctors to the UK than any other African country, so the bilateral connection is already present and there is potentially a high demand for Vital services. In South Africa, just as in Nigeria, a more effective but highly expensive private healthcare system functions alongside a crumbling public healthcare system. In the UK, just as in the US, CVD is the leading cause of death, signifying a growing percentage of patients who require regular monitoring and could be more easily and reliably cared for at home through telemedicine. The process for facilitating, launching, evaluating, and ensuring the sustainability of the Vital scheme in the context of the UK and South Africa would then merely involve adjusting the partners and sponsors and subsequently adjusting the payment scheme and level of self-organization to ensure that context-specific regulations are followed.

RURAL AND URBAN NODES IN DEVELOPING COUNTRIES

While Vital principally focuses on the return migration of health workers, there is the potential to replicate the Vital model on a national basis within developing countries. Healthcare in most developing countries is clustered in urban areas, leaving a vast rural population without access to adequate medical consultations and treatment. At the same time, mobile technologies have rapidly been adopted throughout both rural and urban spaces in developing countries, allowing for technological solutions to solve commonplace development problems.

Therefore Vital could facilitate a multilateral relationship between a central urban node, in a place like Abuja, Nigeria, where skilled health workers have experience with offering Vital services are based, and several rural nodes, in villages with community members in possession of a smart phone so that they could support the Vital app. A special agreement could even be reached with local telecommunications companies to offer discounted smart phones to members of villages who have signed up for Vital services.

Vital would not only fill a hole in developing countries' healthcare networks, but also act as a corruption safeguard, since reliable and transparent financial transfers will be enabled thanks to the oversight from the Vital Social Enterprise. In addition, it will be more economical for residents of rural areas or those who are subject to domestic seasonal migration as people will be able to arrange and carry out medical consultations from wherever they are with a smart phone, avoiding any need for 'informal' payments. The rural-urban Vital model could also help to fund the provision of automated drug dispensers, similar to the Automated Teller Machines found in a bank, in rural villages that could technically control for whom and for how much drugs were purchased, and to keep them in a secure and regulated environment. This could improve Vital services in that rural inhabitants would not need to travel the distance to an urban centre for treatment, but could receive medical treatment much closer to home. Overall, a rural-to-urban replication of the Vital scheme could have development benefits that do not only directly benefit return migrants and patients in OECD countries, but also provide an added opportunity for migrant health workers to give back to their country of origin upon their return.

A P P E N D I X

INDICATIVE SERVICES AND PRICES

Category	Responsible Vital Provider	Service	Approx. time commitment	Approx. fee (US\$)
Regular patients	Doctor / Nurse	Initial health consultation – healthy patient	15 mins	30
	Doctor / nurse	Repeat prescription	5 mins	10
	Doctor	Medical certificate	10 mins	10
Patients with chronic conditions	Doctor	Initial health and lifestyle consultation	20 mins	40
	Doctor	Chronic condition treatment plan	20 mins	30
	Doctor / Nurse	Chronic condition treatment plan review	15 mins	20
	Doctor / Nurse	Daily contact/reminders for patients on chronic condition treatment plans	5 mins	3 per day
	Doctor / Nurse	Daily monitoring of home device data	10 mins	5 per day
Elderly patients	Doctor	Initial health and lifestyle consultation	20 mins	30
	Doctor	Independent living treatment plan	20 mins	20
	Doctor / Nurse	Independent living treatment review plan	15 mins	20
	Doctor / Nurse	Daily support video-chat	15 mins	15
	Doctor / Nurse	Daily monitoring of home device data		5 per day
Pre-Natal patients	Doctor	Initial health consultation	20 mins	30
	Doctor / Nurse	Monthly health review	10 mins	15
Post-Natal patients	Doctor / Nurse	24/7 doctor-on-call service (the preferred Vital provider is available at all hours to answer questions at challenging times)	24 hour availability required	50 per day
Mental health patients	Doctor	Initial health consultation	20 mins	40
	Doctor	Treatment plan	20 mins	20
	Doctor /Nurse	Treatment plan review	15 mins	20
	Doctor / Nurse	Daily support video-chat	15 mins	15

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