

*Clinician Bobo Chamfya seeking diagnostic support via the VDr's custom app*

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*The Virtual Doctors is the UK's leading primary health care International Telemedicine Charity and the largest charitable telemedicine provider in Zambia. Following a small pilot, we are about to expand our service across Malawi. The organisation's principal aim is to improve primary healthcare and prevent unnecessary referrals to hospitals. Using a Smartphone App, the service connects isolated health centres in rural Zambia with volunteer doctors, based predominantly in the UK.*

[Watch this video about the Virtual Doctors](#)

## Intro

This year so far has seen the charity further navigate the Covid pandemic both in the UK and Africa. We continue to connect Clinical Officers in Zambia and Malawi with over **200 volunteer NHS doctors** who support them with diagnosis and treatment advice for complex patient cases. These NHS Doctors experience of Covid management is ever more vital as a **new and devastating wave of Covid sweeps across Zambia**. The capacity of the limited number of doctors in Zambia has been diminished due to personal Covid sickness or Covid affecting their families. We also conducted a major Monitoring & Evaluation (M&E) study and continued to upgrade our app and technology. Currently, we are in the process of launching a Crowdfunder campaign aiming to raise the much-needed funds to ensure we can continue to help those who are most in need by filling the gaps of knowledge and doctor's capacity.

2021 marks the fifth year of the current incarnation of the Virtual Doctors (VDrs) telemedicine service, using the custom App, built by our amazing Volunteer Tech Team in their spare time. In 2016, following close collaboration with rural clinicians and the Zambian Ministry of Health, we developed a bespoke telemedicine solution to use with smartphones, which now fosters the provision of the so needed instantaneous doctors' capacity and diagnosis during the pandemics and beyond.

Currently, our service is made available to frontline health workers in over **230**, mostly rural, health facilities (health centres and some hospitals) right across Zambia and a pilot in neighbouring Malawi, covering a population catchment of about **3.5 million** people. Over **8,000** patient cases have been handled by our volunteer doctors, many of them life changing for the patients. The work of the Virtual Doctors has helped drive the narrative around telemedicine in Zambia but most importantly it has helped in support of improved primary health care for rural communities.

Furthermore, we are looking into how we can hand over the VDr's service to our partner, the Zambian Ministry of Health, and expand our service further in Malawi. There has been significant interest in VDr's service from other countries in the region and beyond.

Our mission: by 2025 we will provide **750** rural health workers in Africa with access to medical knowledge that will improve the health of **18,000** people per year. To complete it and continue building on these achievements we need to invest into future-proofing our app infrastructure.

**WE NEED YOUR HELP!** In order to help overcome the pandemic, we need **£350,000** to fund such an extensive tech update, which will allow us to adapt the service to the needs of any health system in the region. More than ever, the Virtual Doctors need you, our precious supporters, to continue to provide our vital service and achieve our mission.

## The pandemic in Zambia – one year on

Since the beginning of June, Zambia has been experiencing a third Covid wave with a significant surge in new cases with unprecedented numbers of daily covid-19 fatalities, resulting in reduced capacities in city mortuaries. On 17<sup>th</sup> June, the Ministry of Health re-enforced the Public Health COVID prevention standard measures and increased social distancing. In cities the COVID-19 designated admission centres are full, causing most people to be managed at the community level. This has created a negative effect, with an increase in deaths. Patients prefer to remain home rather than attempting to go to hospitals where they are turned away unless they need to be on oxygen or the limited ventilators (as our supporters know, hospital referrals in the rural areas we operate are difficult at the best of times).

This is where our telemedicine and e-learning service in use at the heart of the community comes into its own, supporting social distancing and relieving the burden on the healthcare system, by providing free access to doctors and knowledge capacity, enabling virtual triage and reducing unnecessary referrals to increase care locally. Our Volunteer Doctors in the UK, many of whom have been at the forefront of the Covid pandemic in the cities, have good experience to share with the Clinical Officers (CO's) in Zambia and Malawi on identifying Covid patients and then how to best treat them, particularly in the absence of oxygen and ventilators. One year on from equipping our service users with WASH stations and supplies, we continue to provide frontline health workers with Covid guidelines as endorsed by the local Ministry of Health. Finally, our service ensures existing illnesses and conditions are not neglected – a common mistake made during outbreaks like Covid.

## Update on our Operations

**Zambia:** Since our last update at the end of 2020, our Volunteer Doctors have consulted on over 1500 complex cases and we have focused on consolidation over expansion of service as we prepare to institutionalise our telemedicine service by

handing over its management to the Zambian Ministry of Health (MoH). Our team in Zambia continues to focus on change management by strengthening the involvement of the District Health Offices (DHO's) in taking lead of VDr's activities and supervising the use of the VDr's service in their Districts. Starting in June 2021, quarterly province-specific Clinical review meetings with Clinical Care Officers (CCO's) and COs will be conducted to introduce task shifting from VDr's staff to District Health Office staff (DHO) as one of the initial change management activities. Most recently, we hosted a consultative conference involving key stakeholders at the MoH including the Director of Clinical Care, Dr Alex Makupe, all 36 DHO's we work with as well as some of our Zambia board members. This meeting was a chance for the MoH senior management to further endorse the VDr's to the DHO leadership as well as understand any issues on lower usage or technical issues and how to address them, as well as ideas to generally improve the Virtual Doctors service in the districts. Dr Mukupe highlighted that e-Health was focused on two key considerations: **Increasing knowledge and Telemedicine** and congratulated the Virtual Doctors as a valued partners of the MoH by ensuring a sustainable and effective telemedicine service in the districts. He also highlighted the need to strengthen e-health services and remote diagnosis especially so during the COVID pandemic.

Some of the key outcomes included the desire by some DHO's for the Virtual Doctors app to be available via Google Play to be downloaded directly on CO's personal phones. This would be a game changer for the way we distribute the service. Rather than providing devices, we would pilot the app directly on CO devices, which would reduce our costs considerably and negate the need to purchase devices. Furthermore, DHO's requested adaptations to allow them to monitor the usage of the service more easily by their CO's and for this to be a District specific function within the patient cases database.

We have delayed expansion to allow us to focus on consolidating our existing 233 sites and re-deploy devices in a way that optimises usage and service as well as addressing the key actions from the consultative meeting.

**Malawi:** We are making good progress with the required process of establishing a Malawi entity of the Virtual Doctors and have appointed three directors for the future Malawi VDr's board of trustees. The Malawian Ministry of Health has requested we roll out our service countrywide and they are fully committed to embedding the VDr's into their diagnostic & clinical care procedures. We will start with setting up health facilities in Central Province of Malawi. At the time of writing, the Covid surge in Zambia is also affecting Malawi. This has set back our expansion start in Malawi. We are unable to allow our Zambia team members to travel to Malawi to kick-start the process for training the Malawi MoH trainers and helping with the sensitisation process in the nine expansion Districts of Central Province. We are currently determining how we may do this remotely.

**Tech update:** We are testing an updated version of our app, which includes additional data fields to help improve the amount of information a CO enters to allow our volunteer Doctors formulate a more accurate diagnosis assessment and offer more appropriate treatment advice. Our volunteer Tech Development Team has been working – harder than ever – in preparation for the handover to the Zambian MoH, more specifically on an improved security App-only capability. This would negate the need for us to provide the extra layer of security via the mobile device management software we provide – saving costs – but more importantly, allow us to provide the app via Google Play to COs personal devices and save us the costs and logistics of providing expensive smartphone devices. However, this is very much dependant on the ownership of smartphones by COs (which has increased considerably since we launched the app in 2016) and provision of internet data, and whether the MoH may help facilitate some of these costs. We will provide an update on this component in our Winter report.

In parallel, we are starting a pilot for a UK NHS Primary Care Network, who wish to use our technology for use in nursing homes and for carers working with frail and elderly patients in in the community. The idea is to help mitigate unnecessary GP and ambulance call-outs. This means a service developed for use in rural Africa, could be taken up in the UK, a **superb example of reverse innovation**. This could also lead to income generated from PCN budgets paying for our UK service with 100% of income supporting our service in Zambia and Malawi.

## In the Field

Our plans for the rest of the summer had been to visit the districts and sites where we have observed more consistent lower usage of the service, to understand the needs of the service users and how to address them. However, the recent Covid surge in Zambia means we have put field visits on hold and the team are working from home. In the meantime, the team will be initiating remotely the process of training of CCOs and District Information Officers to manage and monitor the logistical components of the service i.e. management of devices and data provision (facility list and also inventory of

devices, repairs & data use). This follows the kick-off in January of Quality Metrics Assessment Meetings with CCOs with the objective to review and analyse usage performance to improve service delivery going forward.



The team continue to host the very popular monthly Virtual ‘Healthcare Show and Tell’ sessions, ‘Starring’ a different CO each time presenting their handling of a patient case where they were supported by volunteer doctors via the VDr’s app, for instance the case of a nursing mother suffering from a serious abscess. Our service users have been making this their platform to communicate with each other across the geographical divide that has only been made deeper with Covid restrictions. We are proud to provide them with a peer community improving solidarity and giving further, much needed support for their work.

For the purpose of appearing in the ‘Working Lives’ feature of [Pulse Magazine](#), the UK GP publication, we were able to send a photographer into the field in Zambia, Vicky Kelly (seen left), who captured among other the beautiful image of our service in action on the cover of this report, featuring the clinician Bobo Chamfya, our Clinical Officer spotlight below.

### Clinical Officer Spotlight

**Bobo Chamfya, nurse in charge at Namumu Health Post in Siavonga District, Southern Province.**

Bobo, a registered nurse, has been in the service for 3 years and a VDr’s beneficiary since December 2019. She is currently working in the ART and outpatient department, serving patients travelling 5km to 10km to seek medical attention - a short distance for rural Zambia.

*“Among other things I love about my job, one of them is counselling my patients on so many issues that affect them; it could health wise or social wise.”*

In her free time she loves dancing and taking walks with her dog.



### Clinic Spotlight



**Matemba Rural Health Post, Vubwi district, Eastern province.**

**Clinical Officer in charge: Mwila Justine.**

The facility is on the border between Zambia and Malawi, which makes it a local primary care centre for Zambians (15 Km radius) but it welcomes patients from Malawi as well, who will travel much longer distance to seek care including access to a specialist via the VDr’s service. The patients are usually subsistence farmers.

### Case study: Care in the time of Covid

Over the last 15 months, as well as providing Wash Stations, the Virtual Doctors has dealt with referrals about many aspects of COVID management. Early on, most of the case queries were around practicalities of testing, isolation and community care. It gave the Clinical Officers a chance to discuss and understand principles of management, as we learnt together and shared our knowledge. Patients requiring hospital treatment for COVID in Zambia are referred to designated facilities, so not all our team members are involved in the ongoing care of such patients. But we were certainly receiving referrals from some of these isolation units. To share learnings quickly across the group, we put together a COVID case scenario, with the help of one of our fantastic Zambian Physicians, outlining the typical symptoms and signs of a patient with severe COVID and describing the standard management available in a District Hospital.

At the moment, as a terrible third wave tears through Zambia, our clinicians are seeing increasing numbers of sick COVID patients. We have advised on both young and elderly patients, on patients with co-existent diseases such as diabetes and HIV and also on sick pregnant patients. We have been consulted about management of symptoms and complications, about treatment options and need for escalation of therapy and about end-of-life care.

One of the major threats from the pandemic is the disruption to Essential health care services and the long-term problems this will bring worldwide. The [WHO Pulse Survey](#) looking at the impact of COVID on Health Care describes the ‘substantial disruption to essential health services across the globe’. It notes that access to Telehealth technologies was limited in 70%



of countries that they surveyed. The Virtual Doctors model has allowed us to continue giving expert advice to Primary Health Care Workers throughout.”

[Read on here for the full case study](#), by Dr Jo Loveridge, one of our Volunteer Doctors, Medical Governance member and Education lead. *Its 5,000 miles from the UK to our colleagues and their patients in Zambia. But we bridge the gap with our Telemedicine service. We cannot do everything from where we are. But we can do something that can make a difference.* Other case studies can be found [on our website](#).

## Monitoring & Evaluation

In 2020 the Chalker Foundation for Africa kindly provided the finance for the VDr's to conduct a professional and comprehensive Monitoring and Evaluation (M&E) study of the service, covering the year of 2020. A tender for the contract went out and after a series of interviews a consummate team of Zambian M&E consultants were awarded the contract. 6 months later, drawing on both quantitative and qualitative data and after many miles travelled across Zambia interviewing VDr's stakeholders and beneficiaries, a draft evaluation report has been submitted. The Impact Evaluation was developed to assess the extent to which the VDr's service was **Relevant, Effective, Efficient, Impactful, and Sustainable**.

**In Summary:** The evaluators concluded that the VDr's has made a significant contribution towards providing quality Primary Health Care (PHC), reducing referrals, and reducing clinician isolation in the areas of its operation. For health workers the VDr's builds their capacity to diagnose complex health cases, reduces the workload on specialised consultants, and isolation by providing a telemedicine platform that Front Line Health Workers (FLHWs) can use to communicate at any time. To the patient, the VDr's helps reduce referrals and the cost of attaining quality health care by providing alternative diagnostic health advice to COs within the patient's locality.

Concerning efficiency and effectiveness, all VDr's activities were largely implemented as planned in the period under review leading to improved PHC from community members that needed it. The evaluators did not note any resource mismanagement by the VDr's, rather they were happy to learn that every penny is carefully planned for and utilised ensuring value for money. Overall, the evaluators found the VDr's to be very relevant, efficient, and impactful but will need to do more work to ensure its sustainability.

## Income generation

2020 was the most successful year for fundraising for the Virtual Doctors which saw our income grow by **50%**. 6 months into 2021 the picture is very different with an unprecedented drop in income which has required the Virtual Doctors to begin to draw down on our reserves, diligently saved over the years. The Charity, like others in the sector, is feeling the effects of the global pandemic that has seen £4bn worth of cuts in foreign aid, funders prioritising their support to UK based projects and/or funding charities that are either previous grantees or existing grantees, and individual donors facing increased pressure on household disposable income.

The Virtual Doctors needs to raise £350,000 by the end of December 2021 to continue building the capacity of health care workers to improve access to quality health care in rural Zambia and Malawi, at a time of increased demand for services around the world that combat the impact of COVID-19 and ensure existing illnesses and conditions are not neglected.

All at the Virtual Doctors are working hard to raise funds from traditional supporters including Trusts and Foundations, Corporates and Individuals. We also have a number of exciting fundraising initiatives that we would love you to join: Later in July we will be launching our Crowd Funder aiming to raise the £35,000 to support our efforts helping Clinical Officers deal with Covid patients and prevent unnecessary mortality. In the meantime, **we welcome pledges**, as fundraising campaigns often perform better when new donors can see evidence that others have supported the cause before them. If you are a regular donor, you can have your July donation assigned to the upcoming Crowd Funder - or make a one-off donation of course. [See options here](#).

One of our amazing trustees has started a '1,000 Club', looking for 100 friends and colleagues who will commit to giving £1,000 per year for 5 years, thus securing the future of the organisation with unrestricted funds for operations. The results have been inspiring and there is space for more members in this most prestigious club!

Our signature sports fundraising event the Royal Parks Half-Marathon in London is expected to take place in October 2021 after being cancelled last year. We still have some of our charity places up for grabs, so if you are up for running this iconic race in support of our work, [contact Lina](#) fast!

## Medical Team



We have welcomed 17 new medical volunteers into our ranks since the beginning of the year. As of June 2021, patient cases from Zambia and Malawi are now handled by more than 207 **volunteer doctors** across the UK, covering 25 medical specialities.

More than ever, we want to thank our volunteer doctors for their indefatigable support at an unprecedentedly challenging time for the NHS. They are the backbone of our free telemedicine service and we could not bring it to rural communities without them. For a spotlight on one of our amazing medical volunteers, head to our website to [read about Dr Ian Cross](#), who has been a Virtual Doctor since 2018.

The Medical Team held its first Virtual Health Conference in January, giving the volunteer doctors an overview (for newcomers) and update (for the veterans) from VDr's Founder & Executive Director Huw Jones and Volunteer Medical Director Dr Daniel Grace, as well as an opportunity to virtually meet each other and connect amongst themselves.

**Our focus on education does not just apply to our service users:** The 'Doctors of Last Resort' (DLR) team, who triage and reassign (when appropriate) the growing case load is now supported by three 2<sup>nd</sup> year students from Keele Medical School, in a mutually highly beneficial arrangement. To find out more, read volunteer Livi Woosey's [latest spotlight on DLR support student Izzy Degroot here](#). We have also taken on two Cambridge University final year medical students who wish to do their electives with the Virtual Doctors. In a normal year, final year medical students often take up the opportunity to travel abroad for their electives, which is not possible under current Covid travel restriction. Dr Graziella Quattrocchi and Dr Jo Loveridge from our Medical team will focus them on research and education projects as part of their electives.

Finally, don't miss [this insightful account](#) for doctors.net.uk, by volunteer Doctor Dr Kerry Greenan, of how the pandemic cut short her volunteering placement in Zambia but led her to join the ranks of our virtual doctors instead!

## Team update – hello & goodbyes



We have bidden farewell to Medical Trustee Dr Diana Forrest and Technology Trustee Ian Clarke. In April we were delighted to welcome two new members to the Board: Dr Isabelle Widmer (*left*) is an Executive Coach who has worked as a clinician in government research, pharmaceutical marketing and medical affairs, and consults on transformation programmes for multi-national healthcare companies. Jon Crouch (*right*), on the tech side, joins us with a wealth of experience as CTO and Change management in the IT and Banking sectors.



Our Regional Director Shakerrie Allmond has moved on to pursue an MBA back in the USA and will be replaced by a new Country Manager.

## What our Stakeholders say

*"The best thing I love about the VDr's is that they give detailed feedback on the treatment".* Bobo Chamfya, Namumu Health Post, Siavonga District, Southern Province

*"I have been with the Virtual Doctors for a year now and the experience has been great because they have helped me manage cases better, their response has been really good."* Joel Buleya, Luili Rural Health Center, Mumbwa, Central Province.

*"Being in a team that is changing healthcare delivery in under-served communities is incredibly inspiring to me. In some ways it is a dream come true from my student days. I am excited to have the opportunity to serve those who need it most,*

*not as a clinician as I once imagined, but using all the other tools I have accumulated over the course of my career."* New trustee Isabelle Widmer

*"I am looking forwards to supporting its development at such a crucial time in its evolution."* New Trustee Jon Crouch.

## Finally – from our Chair

**Because of you...** Every day, over 200 NHS Doctors finish their busy shifts and go on to consult on complex cases for over 230 Clinical Officers in Zambia and Malawi. Together they have the ability to improve the lives of over 4,000 people a year, with the potential for many more.

**Health Inequality** It's because of you, our donors and investors, that we can do this. A massive thank you to all of you for your continued support and in many cases pledges to support growth in our impact whether that be financial, contacts and advice. Our donors support us for many reasons including their strong belief that healthcare should be universal- wherever you live in the world. We are seeing an increase in funders come to us because of the need to understand climate change and the health inequalities that this brings to human beings.

**From Africa to the NHS** We are also doing some very exciting work taking what we have learnt from telemedicine across thousands of kilometers between the UK and Africa and 'reverse engineering' it back into the NHS to help local GP surgeries to connect with community carers and nursing homes. It is quite unusual for this to happen but we feel it's important that we support the NHS because of the volunteers it provides for our service. Watch this space for more information.

So a busy time for us all on your behalf. Thank you for your support. It's appreciated. It's needed. We can go faster if you like what we do and you tell friends, family and contacts what we do. Their support would also be appreciated.

Enjoy the summer, a greater sense of freedom for more and more people every day and what is hopefully a long summer ahead of us.

Graham, Chair, the Virtual Doctors

We hope you find this Report inspiring and if you do, we ask you to help us raise awareness by sharing with others: follow us on [Twitter](#), [LinkedIn](#), [Instagram](#) and [Facebook](#).

Huw Jones - Executive Director

Graham Precey Chairman of Board of Trustees

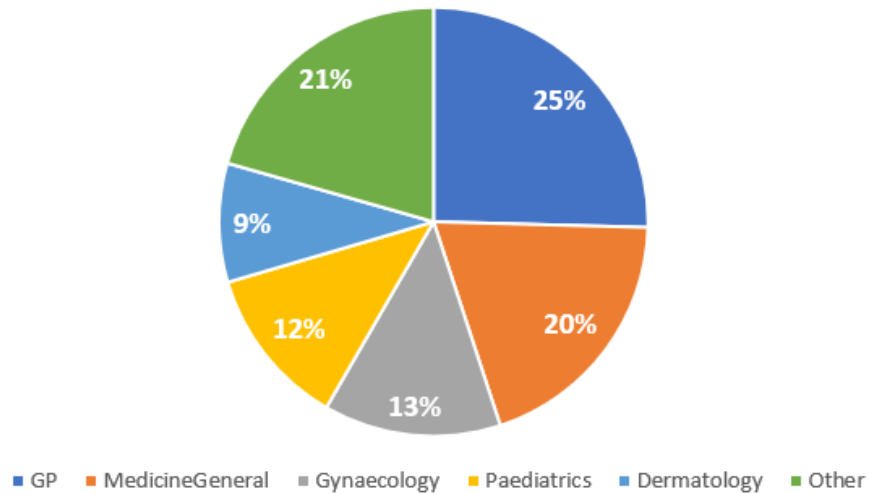
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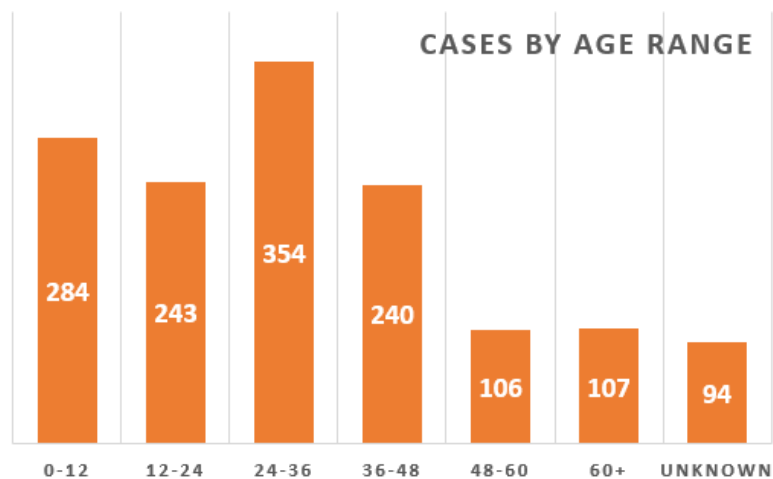
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## APPENDIX *Based on usage data from Zambia and Malawi (Jan-June 2021)*

**Patient Cases by Specialism**



**CASES BY AGE RANGE**



**HIV Positive?**

