



Secure Medical Chat & Referral

# Vula: Carte Blanche Information Kit

## THE VULA SOLUTION

Vula is an app that connects primary directly with specialists. Users can make referrals, get advice, find information, and undertake diagnostic tests - all through their mobile phones. Vula has been described as the Doctor's Whatsapp, because it provides medical practitioners the ability to safely share health related information instantaneously.

Vula aims to bring affordable and reliable health care to all. The app began with Ophthalmology, but will soon grow to include other medical specialties including Orthopaedics, Burns and Cardiology. Vula aims to become the go-to service for secure chat and medical referrals.

\*Helpful link: BBC Video: <http://www.bbc.com/news/health-31877594>

## 5 BENEFITS OF VULA

- Quick - Vula users can refer a patient in less than 5 minutes.
- Easy - With just one quick form, a patient is ready to be referred.
- Secure - Medical professionals can share patient information via Vula's secure, cloud based, chat platform.
- Affordable - A Vula referral costs as much as a Whatsapp or Mxit message.
- Reliable - Having specialists guide healthcare workers through the treatment process results in more correct diagnoses and fewer unnecessary referrals.

## FEATURES

The Vula app is free to download for individual health professionals from the Play Store on Android and the App Store on iOS. The app allows primary health workers to refer patients via their mobile phones by simply filling out a patient form, taking pictures and chatting to specialists. Each medical specialty (Orthopaedics, Burns and Cardiology) has a slightly different form, but all use the same process of information exchange to facilitate quality referral.

Through facilitating multiple specialties for health workers to refer to and communicate with, Vula allows for better quality diagnosis and treatment for patients. Vula seeks to improve referral systems through the use of modern mobile technology, especially in hospitals in developing countries such as South Africa.

Vula's business model also offers **Vula Practice**. This paid version of Vula allows teams/departments of health practitioners to form a 'Practice' which allows for additional functionality such as the On Call function, sharing of patient files between team members, private chat and the ability to both send and receive referrals.

### *In-app Screen Shots:*

The image displays three screenshots from the Vula app interface:

- Left Screenshot:** Patient information for a 42-year-old male, dated 15 Nov 2015. It includes two chest X-ray images, a diagnosis of '2nd Degree AV block', a clinical question 'Refer to TBH or treat in Clanwilliam?', and a list of 'History & risk factors' including Angina (CCS IV), Dyspnoea (NYHA IV), Hypertension, Diabetes, Edema, Palpitations, and Orthopnea. Allergies listed are Penicillin.
- Middle Screenshot:** A 'History & risk factors' form with sections for 'Cardiovasoular risk factors' (Angina, Dyspnoea, Hypertension, Diabetes, Smoking, Dyslipidemia, Family history: coronary artery disease) and 'Systemio history' (Palpitations, Syncope, Edema). Checkmarks are visible next to Hypertension and Palpitations.
- Right Screenshot:** A continuation of the form with 'Cancer' and 'Evidence of alcohol abuse' checked. It includes a 'Photos' section with a camera icon and the text 'Add photo or video'. At the bottom, there is a confirmation statement 'I confirm the patient has consented to data being saved electronically' and two buttons: 'Save & refer later' and 'Refer patient'.

### **Dr William Mapham**

### **Founding director**

William is a registrar at the ophthalmology department of Tygerberg Hospital. He has served as the Vice Chair of the Rural Doctors Association of South Africa (RuDASA). William previously spent time in New York and Washington where he designed mobile phone applications for healthcare. He has published academic articles on the role of innovation and technology in improving healthcare delivery.

Papers listed below:

- The potential impact of a cataract surgery programme on the care of orphans and vulnerable children in Swaziland. J Pons, W Mapham, B Newsome, L Myer, R Anderson, P Courtright, C Cook. South African Medical Journal, 2012; 102: 140 – 141.
- Social Entrepreneurship in Health. W Mapham, S Kornik. Continuous Medical Education Journal, 2011; Vol 29, No 2: 76.
- Mobile phones: Changing health care one SMS at a time. W Mapham. South African Journal of HIV Medicine, 2008; Spring Edition; 11-15.
- The role of private and other non-governmental organisations in primary health care. G Wolvaadt, J Van Niftrik, B Beira, W Mapham, T Stander. South African Health Review, 2008; 223-238.
- Telling stories to change the country – a combined effort by the HIV Clinicians Society and Soul City. W Mapham. South African Journal of HIV Medicine, 2007; June; 50-51.

### **Debré Barrett**

### **Product Director**

Debré Barrett is a user experience expert who has played a role in the development of Vula from the beginning. Using her skills and expertise, Debré guides the development team in making Vula a powerful and easy-to-use application. Her function crosses over into the creation of Vula's business model.

### **James Lawrenson**

### **Brand Manager**

With a degree in Brand Communication Specialising in Copywriting and experience in the advertising industry, James joined Vula in 2015 as Vula's brand manager. James is tasked with all that the Vula brand says and does and is the contact person regarding all implementation activities.

## Cobi Interactive

## Development team

Cobi are the original developers of the Vula app and constantly optimise Vula. The team are responsible for the up-keep of the app including bug fixing and technical support. Cobi also provides data management services to facilitate efficient access to useful project data.

### CHALLENGE IDENTIFIED

Healthcare screening and referral systems can be improved using the Vula app.

- Accessing a specialist for advice or a referral is not easy. Switchboards require precious time to make the correct contact.
- Inaccurate referrals, especially from distant locations, result in avoidable transport costs.
- With no current feedback mechanisms, inaccurate referrals will continue to be made.
- Vula records all referral data. It is available as a database for quantitative research and can save individual patient reports in PDF format.

### INNOVATIVE PROJECT

The Vula secure healthcare chat & referral app puts a specialist's knowledge and expertise into a non-specialist health worker's pocket. With Dr Mapham's previous experience as the Vice-Chair of the Rural Doctors Association, Vula was created for areas with little or no personal contact with specialists.

Technical Advantages for Rural Areas:

Vula is small in terms of data <6MB, which means it is quick to download. It can be used offline until referrals can be made when reception is obtained. The file size of the images can be decreased if reception is poor. The chat system requires very little data transfer: much less than SMS and similar to WhatsApp; the cost of using chat is minimal (a few cents). By utilising health workers' own phones, a wider usage is possible. E.g. screening can be done home to home in rural communities.

Advantages for Transport:

Patient transport is a precious resource. By helping non-specialists get the advice they need instantly, while with the patient, unnecessary referrals can be avoided and transport reserved for patients in urgent need of tertiary care.

Advantages for Tertiary Care:

With Vula there is no need to use the switchboard to find the specialist on call. The patient information is sent directly to the right person. This saves time for the health professionals. Now, specialists On Call can

get all the patient information they need upon first contact with the referring health worker. This decreases the time spent giving advice or organising a referral.

Monitoring, Research & Medico-Legal Advantages:

For the first time a complete record of the referral process can be recorded. This can be analysed for research purposes in order to allocate resources, arrange training to address education needs and further improve services. It can also be used constructively in medico-legal cases.

## THE INNOVATION - HISTORY

Vula Mobile is named after the 'Vula Emehlo' Eye Clinic in Swaziland, which inspired its creation in 2011. Its concepts were developed and tested in the Eastern Cape at Uitenhage District Hospital. The first live Apple and Android versions were launched in June 2014. The system has undergone several upgrades since then, especially after the research conducted in November 2014

## VULA IN THE MEDIA

Disrupt Africa:	<a href="#">12 African Startups to watch in 2016</a>
BBC World News:	<a href="#">My life is so much better now</a> (includes 4 minute documentary video)
Business Day:	<a href="#">The smart doctor and app that opens rural eyes</a>
NextBillion Health:	<a href="#">Specialist eye care, anywhere</a>
eHealth News Africa:	<a href="#">Vula Eye Health app's improving eye care in rural areas</a>
Disrupt Africa:	<a href="#">Vula Mobile eyes huge potential of mhealth market</a>
Eye Health Journal:	<a href="#">Your favourite apps</a>
SAB stories:	<a href="#">SAB Foundation Winner</a>
Ehealth News:	<a href="#">Vula Sets Eyes on Mhealth</a>
IOL Scitech:	<a href="#">Mobile Health App Boosts Eye Care</a>
MTN App of the year:	<a href="#">Vula 2015 App Of The Year</a>
Ehealth news:	<a href="#">Vula Mobile Looks to Mhealth Expansion</a>
Stellenbosch Vivus:	<a href="#">Innovative Tech Helps Rural Health Care</a>

## ACHIEVEMENTS TO DATE

### 2015 Awards:

- Western Cape Premier's Entrepreneurship Recognition Awards – 2nd prize in Best Social Enterprise category (R50k)
- Sustainable Entrepreneurship Awards in Vienna Austria – 1st prize in the Development and Service category
- Public Service Innovation Awards – 2nd in the ICT category
- African Entrepreneur Awards in Morocco – 1 of 6 prize winners ((R2.5million)
- SEED Award in Kenya for exceptional social start-up enterprise (R50k)
- MTN App Of The Year – Most Innovative App

### 2014 Awards and Grants:

- DG Murray Trust Research Grant (R360k)
- Fund for Innovation in Rural Research Grant (R20k)
- Innovation Hub GAP ICT Competition.– 2nd prize in ICT category (R195k)
- Dream International Social Entrepreneur Award (R80k)

### 2013 Awards:

- SAB Foundation Social Innovation Awards – 1st prize (R1million)
- Shuttleworth Foundation Flash Grant (R50k)
- Impumelelo Social Innovation Gold Award (R40k)

## FUNDED PUBLICATION PENDING:

DR WILLIAM MAPHAM, OPHTHALMOLOGY REGISTRAR AT TYGERBERG HOSPITAL

Testing of the Vula Mobile app as an assessment and screening tool for eye health in three selected hospitals in South Africa. The study included both quantitative and qualitative methods. Data collected by the healthcare workers using the App was generated, and feedback by the eye health personnel and stakeholders was collated through surveys and semi-structured interviews. The research was conducted over a period of four weeks. The research sites included Tygerberg Hospital (Western Cape), Mosvold Hospital (KZN) and Zithulele Hospital (Eastern Cape).

## PARTNERS

Brien Holden Vision Institute & Orbis – Discovery eye care intervention project:

In 2016 Vula will be collaborating with BHVI and Orbis in an eye health care intervention in KZN.

SPF - The Small Projects Foundation

SPF is a social development organisation focusing on the Eastern Cape. It is funding the licence and training fees for the Eastern Cape Department of Health to implement the Vula Mobile referral platform for eye health patients in the OR Tambo District.

University of Stellenbosch

Vula has had a close relationship with SU since the beginning since it was Dr Wiliam Mapham's place of study.

Tygerberg Hospital

William Mapham is an Ophthalmology registrar at Tygerberg Hospital where first implemented Vula in his department with the guidance of Prof Mayer.

MoBurns - Emergency Medical Services

In collaboration with the MoBurns team, Vula was able to add Burns to the list of specialities that medical workers can refer to.

## IMAGES



## LINKS

[vulamobile.com](http://vulamobile.com) | [Facebook](#) | [Twitter](#)