South Africa (SA) is plagued by four clear health problems that have been described as the quadruple burden of disease: HIV/AIDS and TB; maternal, infant and child mortality; non-communicable diseases; and injury and violence. Rates of death and disability remain unacceptably high across the country and especially in more deprived zones, such as Limpopo Province in general and Vhembe District in particular. Access to healthcare is a major concern in SA, particularly in rural communities where there is poverty. There is still inequality in access to healthcare despite post-apartheid health policy to increase the number of health facilities. Although health services are provided free of charge, monetary and time costs of travel to a local clinic may pose a significant barrier for vulnerable segments of the population, leading to overall poorer health outcomes. Most poor communities reside far from health facilities, and are therefore faced with challenges when it comes to travel costs to the health facilities. This results in low utilisation of healthcare facilities in poorer communities. Although different strategies have been implemented to address this particular challenge in SA, there is still a need for more new approaches to achieve equitable access to healthcare, especially in rural communities. Achieving equitable universal health coverage requires the provision of accessible, necessary services for the entire population, without imposing an unaffordable burden on individuals or households.

Following a visit to Brazil by the minister of health and MECs in 2010, the vision of re-engineering primary healthcare (PHC) was discussed. This was the lesson...
learnt from the Brazilian health system, where they were able to improve health outcomes through ward-based outreach teams. Following the discussions, the three-stream approach to PHC re-engineering was adopted by the Department of Health (DOH). The PHC re-engineering strategy aims to strengthen the delivery of PHC services, in the context of the National Health Insurance (NHI) system. PHC re-engineering repositions a curative, vertical, individually orientated system to a proactive, integrated, and population-based approach to service delivery, based on municipal ward-based primary healthcare outreach teams (WBPHCOTs) that include community health workers (CHWs) and home-based carers (HBCs).

In 2011, the PHC re-engineering model was launched in SA as a response to the government’s commitment to ‘strengthening the effectiveness of the health system’ by promoting cost-effective PHC services that are delivered close to communities and households and that encourage health promotion, prevention and community involvement. The PHC re-engineering model is divided into three streams: WBPHCOTs, school health teams and district-based clinical specialist teams.

The WBPHCOT stream in the PHC re-engineered model denotes the level of the health service that provides services to communities, families and individuals in a ward. In order to improve access and health outcomes, and to take health services to the community, the national policy has outlined that communities (wards) should have at least one PHC outreach team comprising a professional nurse, an environmental health officer, health promoters and 6 - 10 CHWs. The nurse who is the team leader is a staff member at a PHC clinic.

The Vhembe health district operates within SA’s district health system (DHS), which is based on the PHC approach, aimed at keeping people healthy and caring for them when they become unwell. Positive outcomes such as increased life expectancy have been observed, but intervention efforts and the significant allocation of resources over the past 20 years through the DHS have not succeeded in strengthening PHC as much as is needed.

Vhembe district started implementing WBPHCOTs towards the end of 2011, when the training of outreach team leaders and CHWs was conducted. The roadshows were also conducted to sensitisce communities to the intervention. This was followed by the establishment of wards where WBPHCOTs were implemented.

The rapid assessment of the Vhembe WBPHCOTs set out to determine the progress of WBPHCOTs, and also to determine which aspects of the programme need to be improved.

**Methodology**

**Study design**

The cross-sectional rapid assessment used quantitative methods. The data sources included a document review of quarterly reports and a district health information system (DHIS) data analysis. The rapid assessment focused on the four Vhembe subdistricts (Fig. 1).

**Data collection**

An initial stakeholder planning meeting was held where topics such as the implementation of the WBPHCOT programme, the purpose of the assessment and possible data sources were discussed. The rapid assessment started on 15 February 2016 and ended on 15 April 2016. The Vhembe department of health (DoH) supplied the Foundation for Professional Development (FPD) with WBPHCOT paper-based data that were collected from households in Makhado, Mutale, Musina and Thulamela, quarterly reports and access to DHIS data. The assessment team then extracted the ward-based outreach teams (WBOT) indicators from the DHIS data.

**Data analysis**

The quantitative data obtained from the DHIS dataset were analysed descriptively using SPSS version...
16 to produce frequencies and percentages of the implementation indicators and outcome indicators where possible.

**Ethics approval**

Ethical clearance was obtained from the FPD research ethics committee (ref. no. 1/2016) and the assessment initiation document, and the final scope of assessment was signed by both FPD and the Limpopo provincial DoH.

**Results**

**Document review**

According to the draft WBPHCOT policy framework and strategy (2015), each ward-based outreach team has a target of reaching 1 500 households per annum. All the team members are delegated; however, they are not fully employed for WBOT purposes. The duty of outreach team leaders (OTLs) is delegated to professional nurses who are fulltime nurses in the facilities, while the duties of CHWs are delegated to HBCs, who are employed fulltime by the non-profit organisations (NPOs) to perform HBCs’ duties.

The results of the assessment reported challenges in terms of resources such as stationery, equipment, batteries and transport to conduct household visits.

As of February 2016, there were a total of 804 538 households registered in Vhembe district, and a total of 151 teams across 97 wards within the district (Table 1). A total of 554 community health workers were trained, and a total of 75 OTLs had been trained since the inception of the programme in Vhembe (Table 1).

**DHIS data**

Secondary data that were analysed looked at WBOT indicators that were extracted from the DHIS for the financial year 2014/2015, which was being assessed.

A total of 71 413 households were visited in the year 2014/2015, of which 36 796 were follow-up visits. Out of 71 413 households visited, only 2 158 households visits were supervised by outreach team leaders. (Table 2).

A total of 23 539 visits were conducted to households with children <5 years old, while 20 038 visits were conducted to households with clients who needed adherence support and 9 337 visits were conducted to households of clients with home-based care.

A total of 3 095 household members were referred to facilities, social services or home-based care. A total of 1 354 clients were referred to the facility while 1 119 were referred to home-based care, and 623 were referred to the social services.

A total of 181 421 headcount household visits were conducted, of which 29 457 were of children <5 years old, while the rest were of children ≥5 years.

A total of 412 campaigns were conducted between the financial years 2014 and 2015.

**Discussion**

The use of delegated human resources is unrealistic because it affects the supervision of the programme. The results of the assessment reported that the professional nurses who work full time in the facilities are delegated to perform the OTL’s duties, but they do not have enough time to go out and support the teams due to gross staff shortages in the facilities.

<table>
<thead>
<tr>
<th>Table 1. Vhembe ward-based outreach teams</th>
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<tbody>
<tr>
<td>Subdistrict</td>
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<tr>
<td>-------------</td>
</tr>
<tr>
<td>Makhado A</td>
</tr>
<tr>
<td>Makhado B</td>
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<tr>
<td>Thulamela A</td>
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<tr>
<td>Thulamela B</td>
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<tr>
<td>Mutale</td>
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<tr>
<td>Musina</td>
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<tr>
<td>TOTAL</td>
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CHWs = community health workers.

<table>
<thead>
<tr>
<th>Table 2. Household visits</th>
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<tbody>
<tr>
<td>Indicator</td>
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<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>OHH CHW supervised by team leaders</td>
</tr>
<tr>
<td>OHH follow-up visit</td>
</tr>
<tr>
<td>OHH supervised visit</td>
</tr>
<tr>
<td>OHH visits total</td>
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</tbody>
</table>

OHH = outreach household.
Jinabhai et al. reported that retired nurses and/or enrolled nurses were often appointed to provide leadership of the WBOTs. In some cases, available staff members in facilities were also allocated double tasks. This strategy is not sustainable even in the short term.

Nxumalo and Choonara reported that in the Emfuleni subdistrict of Sedibeng, the DoH team managers often did not have control over the CHWs working in the WBOTs, as the CHWs are employed by NGOs. The fact that the CHWs are employed by NGOs also limits the DoH in allocating CHWs to teams.

Whyte further reported that WBOTs in Ekurhuleni often lacked sufficient knowledge to conduct household visits. In the case of unimmunised children, only 29% were followed up appropriately. Lack of supervision and poor knowledge were identified as some of the challenges experienced by WBOTs in Ekurhuleni.

The results of the assessment further reported challenges in resources used for household visits. These include stationery, equipment batteries, and transport. This indicates poor planning and the lack of a budget for WBOTs. It affects the proper implementation of the programme and might result in poor outcomes. The report by Jinabhai et al. also confirmed that the required infrastructure and office equipment are often not available to support the WBOTs in performing their duties.

The results of the analysis of DHIS indicators for WBOTs showed evidence of the effectiveness of WBOTs in the implemented wards, although it did not show the impact of the programme. The impact can only be seen when these indicators are combined with facility-based indicators such as early antenatal bookings, retention in care and immunisation coverage.

Paper-based forms and lists are used in all the districts, except for the Northern Cape and Tshwane. This restricts the WBOTs in their service delivery and the distribution of data. If such data could be combined with other indicators, it would strengthen planning and decision-making processes.

Padayachee et al. state that the assessment of WBOTs in the North West Province will only be possible in combination with the assessment of facility-based indicators, which are sensitive to community-based action. The indicators should be reviewed regularly at subdistrict and district level.

Pillay and Baron confirmed the lack of a link between community-based services and the services offered by fixed health facilities. The integration of data and services would increase the quality of care provided at these facilities.

The results of the assessment displayed openness to partnerships, although there was resistance in some sectors. This is based on the referral-form completion rate of 30%, which is very low in comparison to the referrals done. This calls for more engagement of all stakeholders to strengthen partnerships and referral linkages.

The Centre for Health Policy at the University of the Witwatersrand did, however, report on the difficulties in ensuring collaboration between provincial and local government, and claimed that such difficulties could affect implementation and service delivery.

Study limitations
The assessment had to be conducted in a short period of time, and therefore the impact of the project could not be measured.

Conclusion
The DHIS data have shown evidence that the WBPHCOTs are reaching households in the communities, despite...
the reported challenges in terms of human resources, transport and supplies. A total of 804 538 households were reached by 151 teams in 97 wards since the inception of the intervention. Besides the profiling of the households, a total of 3 095 household members were identified and referred to facilities, social services or home-based care during the financial year 2014/2015. The service provided by the WBPHCOTs could be improved even further if co-operation between the various partners and sectors were optimised. This should in turn solve the problems related to infrastructure and consumables.

Acknowledgements. We thank the Limpopo Department of Health for giving us the opportunity to conduct this assessment. We also thank the Vhembe department of health personnel for their participation and assistance throughout the assessment. 

Disclaimer. The findings and conclusions in this paper are those of the authors and do not represent the official position of the Foundation for Professional Development.

Author contributions. Both authors made substantial contributions to conception and design, and/or the acquisition of data, and/or the analysis and interpretation of data.

Funding. The assessment was funded by the Department of Health.

Conflict of interest. None.