

### BRIEFING ON THE FINDINGS FROM A HEALTH ECONOMICS STUDY OF INTEGRATED CHRONIC CARE MANAGEMENT.

Diabetes and hypertension, alongside HIV, are now major health problems affecting people living in Africa. They require lifelong care, known as chronic care. Patients with these conditions typically attend health centres and hospitals once every 1–3 months for monitoring and to pick up medicines. Because of the need to attend clinical facilities regularly, chronic conditions place a large economic burden on both the health services and on patients and their households.

At the moment, health care is organised separately for each chronic condition (i.e. health services organise care from separate clinics). This can result in service duplication. It is also challenging for patients who have more than one chronic condition as they have to attend different clinics.

#### *What was our research study about?*

We evaluated whether services for HIV, diabetes and hypertension could all be brought together (i.e. integrated) under one roof for all patients, whether they had one, two or all three conditions.

This allowed health services to build on the experiences gained from HIV treatment programmes to strengthen both diabetes and hypertension care. We hypothesised that this approach would be effective and economically attractive both for patients living with a single condition and for those with two or all three conditions. The evaluation involved over 2,000 patients in 5 health facilities in Uganda and 5 in Tanzania, with patients followed for about 8 months.

#### *What were the health economics findings from the study?*

In the integrated care clinic, monthly service costs of managing patients with HIV alone were \$34 per patient per month, compared with costs of \$18 to \$19 for managing patients with either diabetes alone or hypertension alone.

#### **Key questions in this economic analysis**

1. What are the economic costs to the health service to manage patients with HIV, diabetes or hypertension when these services are under one roof in an integrated care clinic?
2. What are the economic costs to the patient to access care for HIV, diabetes or hypertension in an integrated care clinic?



The service costs of managing patients with two or three conditions were up to \$5 per person per month more than managing a single disease. Crucially, health worker time and health facilities were used more efficiently in the integrated care clinics. This led to a 22% reduction of the service cost across all patients with more than one condition.

The total economic costs to the patient's household included transport costs (including for carers), consultation fees, purchase of drugs, and lost time away from work. These varied



substantially between the conditions. The average costs per month were \$4 for HIV, \$12 for diabetes and \$6 for hypertension.

The major reason for the differences between these costs was the cost of medicines. For patients with HIV, their cost was 11% of the total economic cost per integrated clinic visit. For patients with diabetes and hypertension, these figures were 48% and 25% respectively.

Patients paid on average \$1.50 for transport per visit to the clinic to access care. This was 4.5% of their monthly income while all economic costs to the patient totalled, on average, 12% of their monthly income.

#### *What are the main messages of this study?*

The economic costs for patients to visit clinics for chronic care services were high relative to their household income.

Patients with diabetes or hypertension incurred more direct costs (known as out-of-pocket costs) than patients with HIV per clinic visit. This is because the patients with diabetes or hypertension purchased some or all their diabetes and hypertension medicines whereas HIV medicines were provided at no cost to the patient.

Integrated care clinics reduced duplication and led to substantial reductions of service delivery costs than would be expected by running standalone vertical clinics. Patients with two or three conditions incurred substantially less costs attending the single integrated care clinic than if they had attended separate clinics.

These are informative findings. We are repeating this study in a larger sample size, in 32 health facilities and with just over 7,000 patients, to generate more robust data.

Written by the partners of the NIHR Global Health Research Group on the Prevention and Management of HIV-infection and Non-Communicable Diseases in Africa. For more information on our studies: [www.lstmed.ac.uk/RespondAfrica](http://www.lstmed.ac.uk/RespondAfrica)