Conclusions:

Use of the client flow analysis tool has brought the issue of patient waiting time into much sharper focus for service providers and hospital directors. Ministry of Health staff agree that a lot more has to be done in order to reduce the long patient waiting time.

Some of the interventions proposed that are being introduced include:

1. Introducing appointments for follow-up visits and mHealth tools that enable patients to schedule their own appointments
2. Reviewing staffing patterns and shifting staff from normal working hours to cover peak times.
3. Appointing additional cashiers and nurses
4. Improving medical prescribing practices - including drug coding or writing more clearly on prescriptions and better communications between doctors/nurses and pharmacy staff about availability of drugs.

Implications for future application of the CFA tool include completing more detailed analyses of the data to flesh out other trends and their causes, expanding the application of the tool to all health facilities as part of the accreditation program, monitoring the implementation of key interventions to determine their effectiveness and disseminating results through the peer-to-peer learning sessions conducted at the decentralized level.

In Rwanda, the Ministry of Health has committed to providing universal access to health services and improving the quality of care. An important factor that impacts quality and access to care is the amount of time patients wait to see providers at a health facility. Patients often report that they avoid coming to the health centers due to long wait times even though such delays could have serious consequences for their health.

As part of Rwanda’s “people-centered” approach to services, the patients’ experience of care is paramount to its success. In response to the populations’ complaints, the Ministry of Health has placed reduction of wait times in the national strategic plan. To support this objective, the RHSS project initiated a quality improvement (QI) effort to measure and identify ways to minimize the waiting time. From 2016 through 2019 the project provided technical support to develop tools and build provider capacity to measure patient waiting and contact time. Armed with accurate data about patient flow and waiting times in health facilities it becomes much easier to identify and reduce bottlenecks.
The RHSS project developed a set of guidelines and an Excel-based tool to facilitate the process of conducting client flow analysis. This was based upon a methodology originally developed by AVSC (Association for Voluntary Surgical Contraception) called COPE (Client Oriented Provider Efficient). Using these tools, the team supported twelve hospitals which included Ruhengeri, Kibungo, Bushenge, Rwamagana, Masaka, Muhima, Nemba, Butaro, Kabgayi, Nyamata, Gisenyi and Rutongo to conduct baseline assessments and monitor the evolution of their client flows. The process of implementing the Client Flow Analysis includes several steps:

1. Select the services that to focus on: It is difficult to conduct a CFA for all patients and every service area, so the facility leadership and quality improvement committee should help to prioritize.
2. Prepare a patient flow chart that covers these key steps for the selected service according to the work flows in your facility.
3. Prepare for data collection. This includes revising the data collection sheet to reflect patient flows, deciding on sample size (in most facilities, it is sufficient to randomly select 50 patients), and training staff to complete the data collection form.
4. Request client consent and give a CFA data collection sheet to selected clients. Assign hospital staff monitor each patient during his/her journey.
5. Complete data collection and data entry into the Excel template.
6. Clean and analyze the data using the dashboard in the CFA tool (see figure 2) and meet with health facility staff to discuss and interpret the results.
7. Develop interventions to mitigate the bottlenecks you identify.
8. Develop interventions to mitigate the bottlenecks you identify.

Results

While the tool has now been used in fourteen hospitals, a subset of 7 have already completed both baseline and follow-up client flow assessments.

The duration of patient waiting time and the amount of contact time with providers varied from one facility to another and depended on some of the following factors: quantity and quality of medical equipment, capacity of human resources, speed of registration process, the physical layout of facilities and policies regarding payment for services.

The average patient service time (contact time) for outpatient clinics was between 18 minutes to 1 hour, while average waiting time was between 3 hours 32 minutes and 7 hours 33 minutes across all the different services. Total time spent at different outpatient clinics by patient varied between 4 hours and 8 hours 30 minutes.

Of the seven hospitals which conducted a baseline client flow analysis including Butaro, Kibungu, Masaka, Muhima, Rwamagana, Ruhengeri Rugongo. The average service time was virtually the same for antenatal and Internal Medicine (39 minutes) while Non Communicable Diseases clinics were slightly less at 36 minutes. However waiting times varied more - with ANC and NCD averaging 5h37m and 6h07m respectively. This was significantly more than Internal medicine (5h 3m). Most challenging was the finding that the average total visit time was over 6 hours hence ranging between 3h32m and 7h33m.

There appears to be very little difference between the amount of time patients are seen by doctors across the three services. Internal Medicine, ANC and NCD spend a similar amount of time with their patients while conducting consultations and carrying out other procedures (ultrasounds).

In addition to waiting time and time spent with the nurse or doctor, the assessment tool gathered data about time spent at different service points in the hospital (security, reception, lab, cashier) - see figure 3 below left. These results indicate that the biggest bottlenecks are waiting to see the doctor or nurse and at the reception.

Figure 4 (above) demonstrates that nearly all hospitals managed to reduce waiting time between the initial baseline survey and later follow-up surveys.

These findings highlight the high opportunity costs of seeking care in Rwandan health facilities. In most cases, patients and their caretakers had to spend their entire day at the health facility.

Although the tool helps to assess the magnitude of the problem, there are likely to be some confounding factors that need to be addressed in future rounds of the survey. These include differences in patient loads or provider availability during consecutive assessment rounds that would naturally affect waiting times.