**Differing Workflows Require Flexible Software**

Below we show patient workflow diagrams for three different hospitals. Each site has differences in how they manage patients.

At the Lighthouse clinic (Figure S4.A) patients are triaged at a nursing station for referral to a doctor or clinical officer. However, at Salima  district hospital (Figure S4.B) the clinical officer on duty is only available in the ART clinic in the mornings. Consequently patients are triaged at reception to ensure that all patients requiring a consultation with the clinical officer are identified as early in the day as possible. Zomba central hospital (Figure S4.C) has a separate workflow for Pre-ART patients (HIV-positive patients who are currently ineligible for receiving ART).

The ART EMR is designed to be sufficiently flexible to accommodate different workflows. This is implemented using a set of rules that control what functions of the EMR may be accessed based on the location of the touchscreen clinical workstation (TCW) appliance.
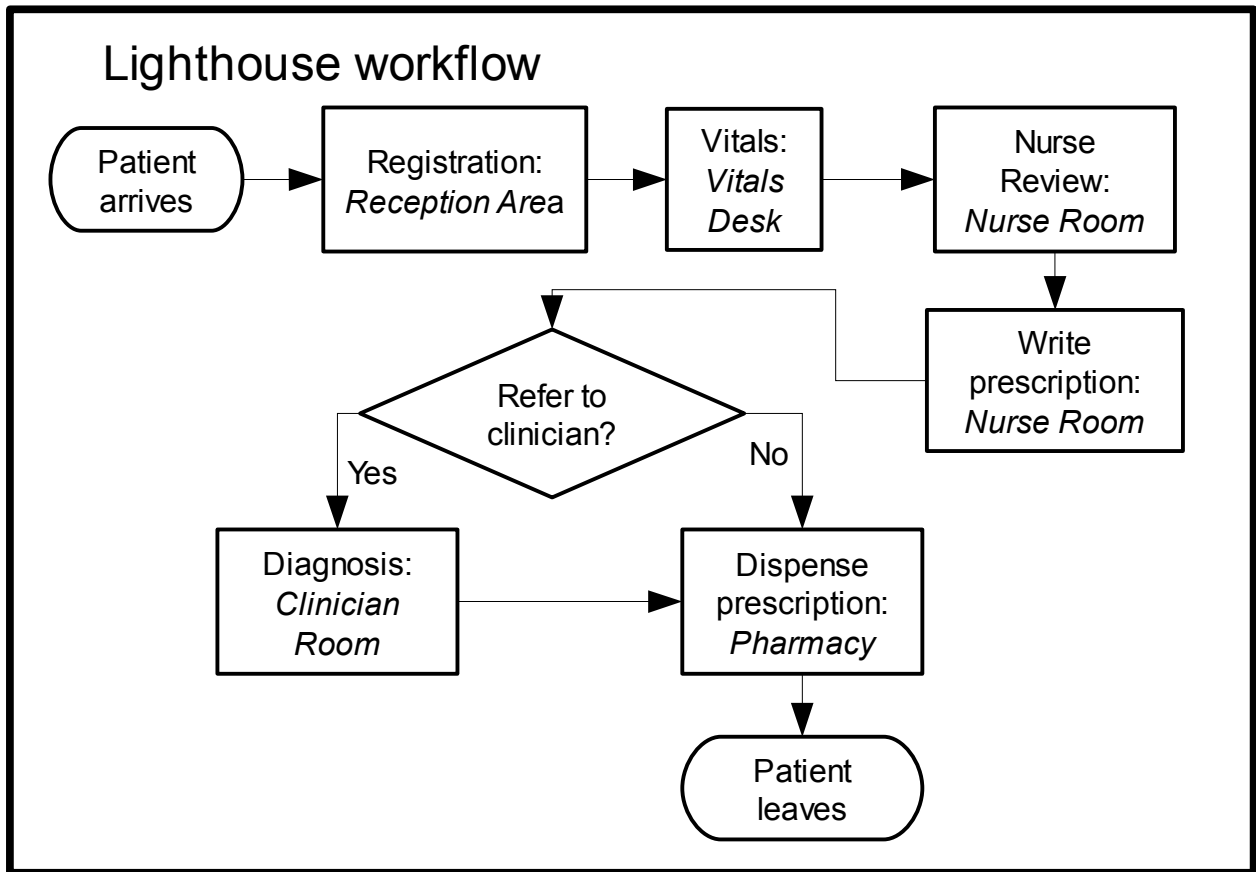
## Lighthouse workflow

Patient arrives → Registration: *Reception Area* → Vitals: *Vitals Desk* → Nurse Review: *Nurse Room* → Write prescription: *Nurse Room* → Refer to clinician?

Refer to clinician?
- Yes → Diagnosis: *Clinician Room* → Dispense prescription: *Pharmacy*
- No → Dispense prescription: *Pharmacy* → Patient leaves

Figure S4.A: Lighthouse clinic workflow diagram

## Salima workflow

Patient arrives → Registration and vitals: *Reception Area* → Refer to clinician?
- Yes → Diagnosis: *Clinician Room* → Write and dispense prescription: *Nurse Room*
- No → Nurse Review: *Nurse Room* → Write and dispense prescription: *Nurse Room* → Patient leaves
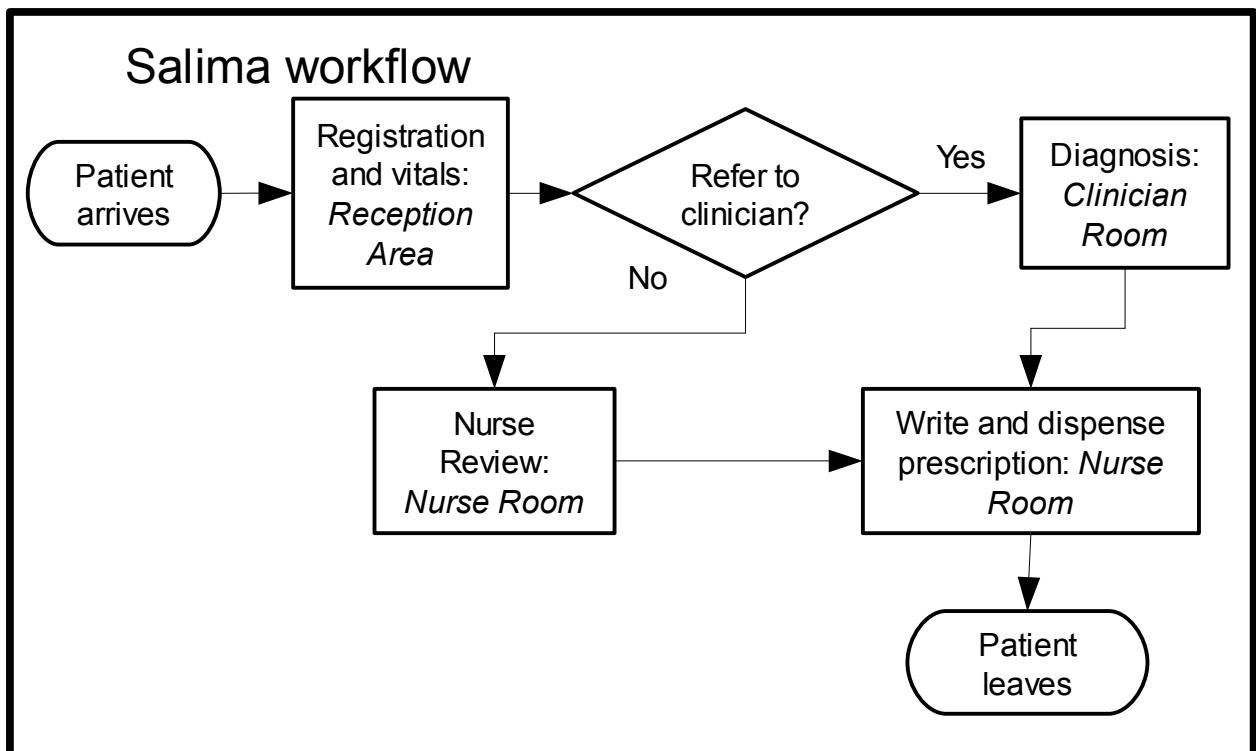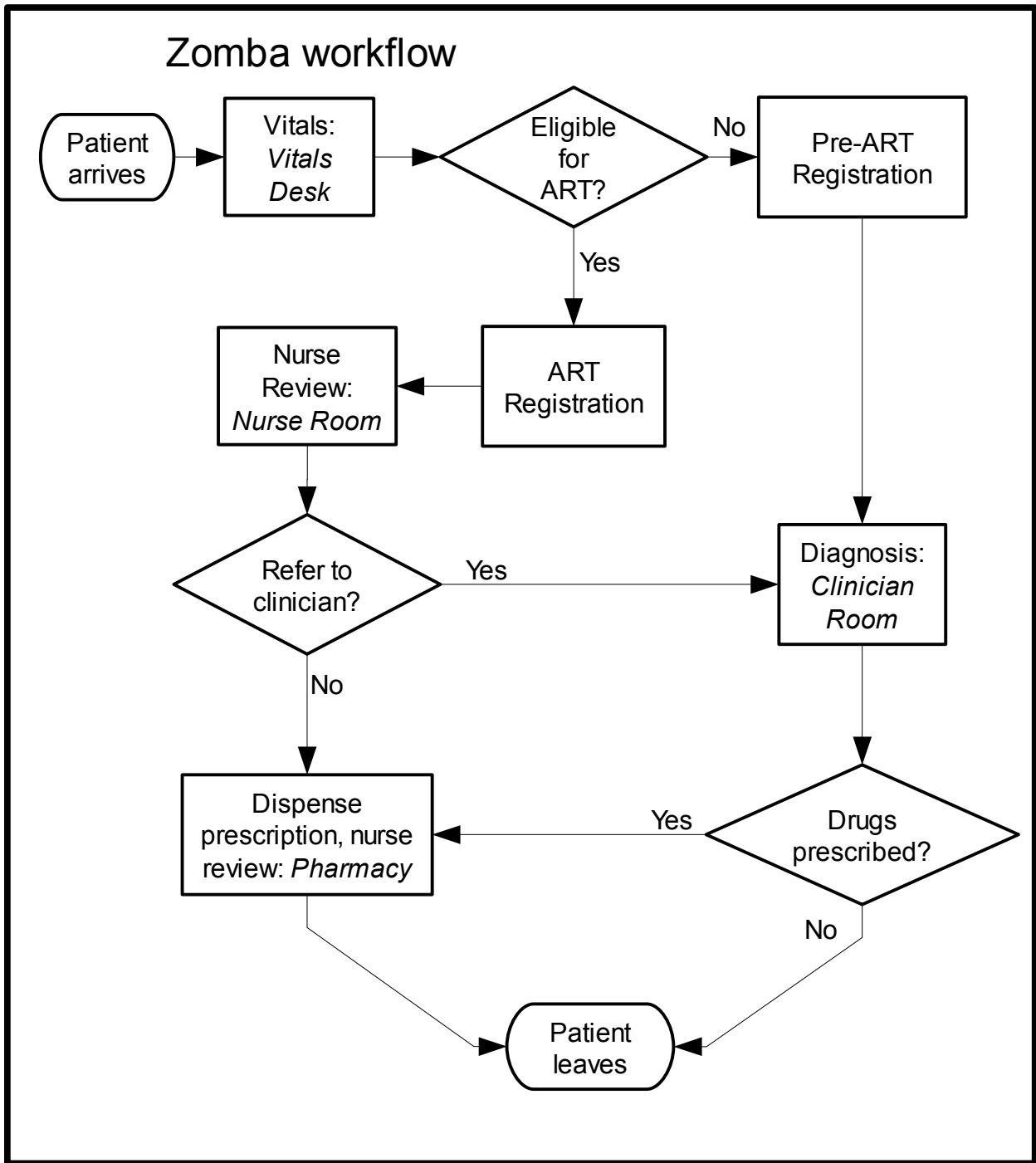
Figure S4.B: Salima district hospital workflow diagram

Figure S4.C: Zomba central hospital workflow diagram