**Figure 3** Flowchart of IMPROvED visits and outcome data collection

**Informed Consent**
Consent obtained at first visit. Women invited to participate will have the opportunity to consider this request before consenting.

**1st visit (9+0 to 13+6 weeks’ gestation) OPTIONAL**
Interview by research midwife, complete clinical data and enter into IMPROvED database
Examination: height, weight, blood pressure, pulse, urinary protein, blood glucose.
Specimens: non-fasting 30 ml blood specimen and a 10ml mid-stream sample of urine. Process specimens within 3 hours of collection, under sterile conditions. Multi- aliquot, barcode and store samples at -80°C. Scan bar codes and enter storage details into database.

**2nd visit (14+0 to 16+6 weeks’ gestation) MANDATORY**
Interview by research midwife, complete clinical data and enter into IMPROvED database
Examination: height (if not measured at 1st visit), weight, blood pressure, pulse, urinary protein, blood glucose.
Specimens: non-fasting 30 ml blood specimen, a 10 ml mid-stream sample of urine and a sample of hair. Process specimens within 3 hours of collection, under sterile conditions. Multi- aliquot, barcode and store samples at -80°C. Scan bar codes and enter storage details into database.

**3rd visit (19+0 to 21+6 weeks’ gestation) MANDATORY**
Interview by research midwife, complete clinical data and enter into IMPROvED database
Examination: blood pressure, pulse, urinary protein, blood glucose.
Specimens: non-fasting 30 ml blood specimen and a 10ml mid-stream sample of urine. Process specimens within 3 hours of collection, under sterile conditions. Multi- aliquot, barcode and store samples at -80°C. Scan bar codes and enter storage details into database.

**4th visit (32+0 to 34+6 weeks’ gestation) OPTIONAL**
Interview by research midwife, complete clinical data and enter into IMPROvED database
Examination: blood pressure, pulse, urinary protein, blood glucose.
Specimens: non-fasting 30 ml blood specimen and a 10ml mid-stream sample of urine. Process specimens within 3 hours of collection, under sterile conditions. Multi- aliquot, barcode and store samples at -80°C. Scan bar codes and enter storage details into database.

**At birth OPTIONAL**
Specimens: a sample of cord blood, piece of umbilical cord and placental samples will be taken and processed within 24 hours.

**End of Pregnancy MANDATORY**
Review clinical records and enter late pregnancy and pregnancy outcome data into IMPROvED database. Collect additional data for cases.

**Final Data Collation and Data Checking MANDATORY**
Systematic review of each woman and baby’s data to ensure all information is accurate and complete by 6-8 weeks after her expected delivery date.