

CAPRISA ACC

ADVANCED CLINICAL CARE

Addressing challenges in
HIV and TB patient management

Clinical support to assist referral and management of Paediatric ART Failure and co-morbidities using a healthcare worker helpline

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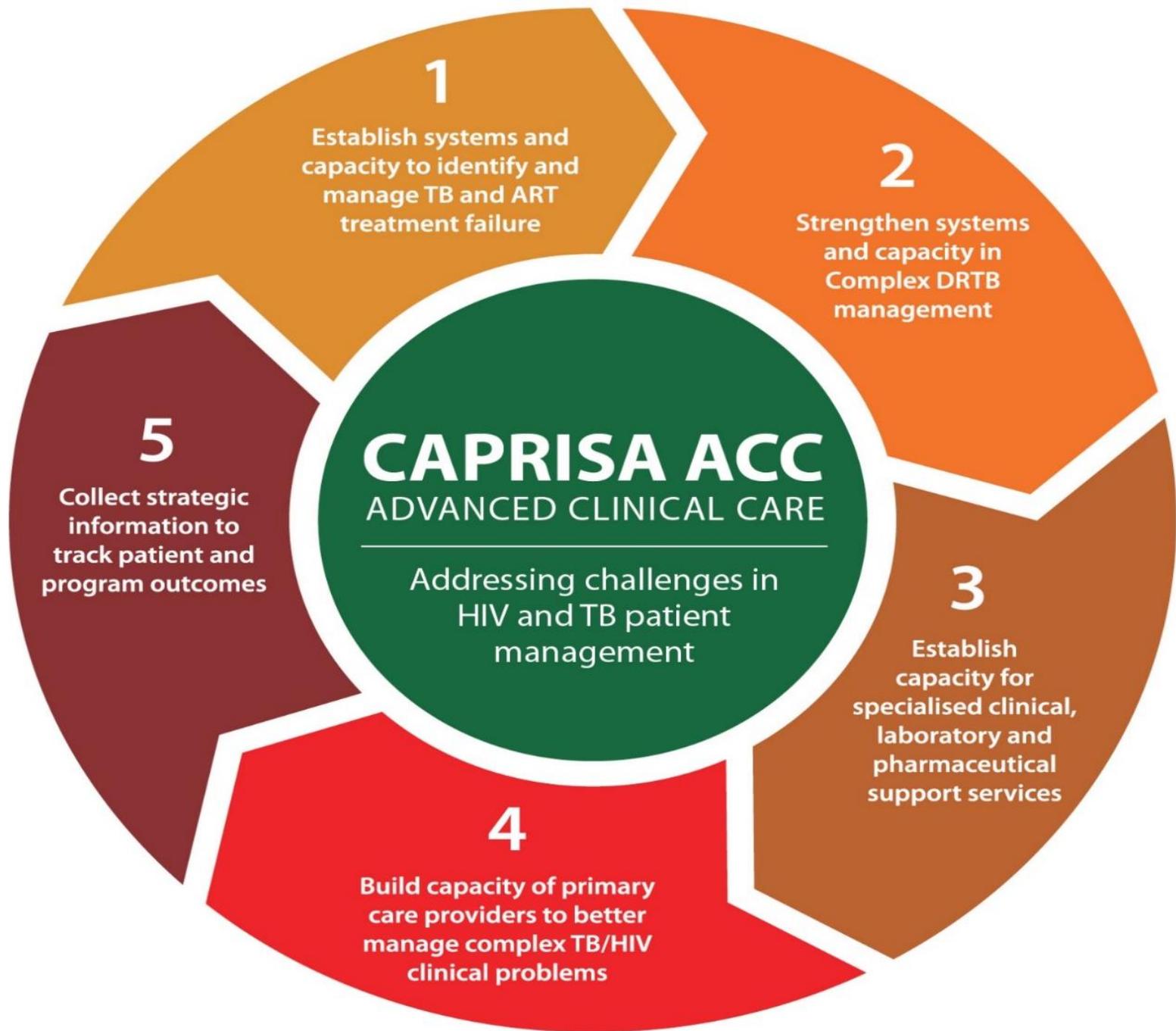
**Best Practices and Innovations in Paediatric HIV and TB Care and Treatment
Workshop**

**Protea Hotel, Pretoria
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Presentation Outline

- Background of ACC Programme
- Background of Paediatric Infectious Diseases Healthcare
Worker Helpline
- Retrospective database review findings
- Key challenges and Solutions
- Conclusion and Next Steps



SA Paediatric ART Overview

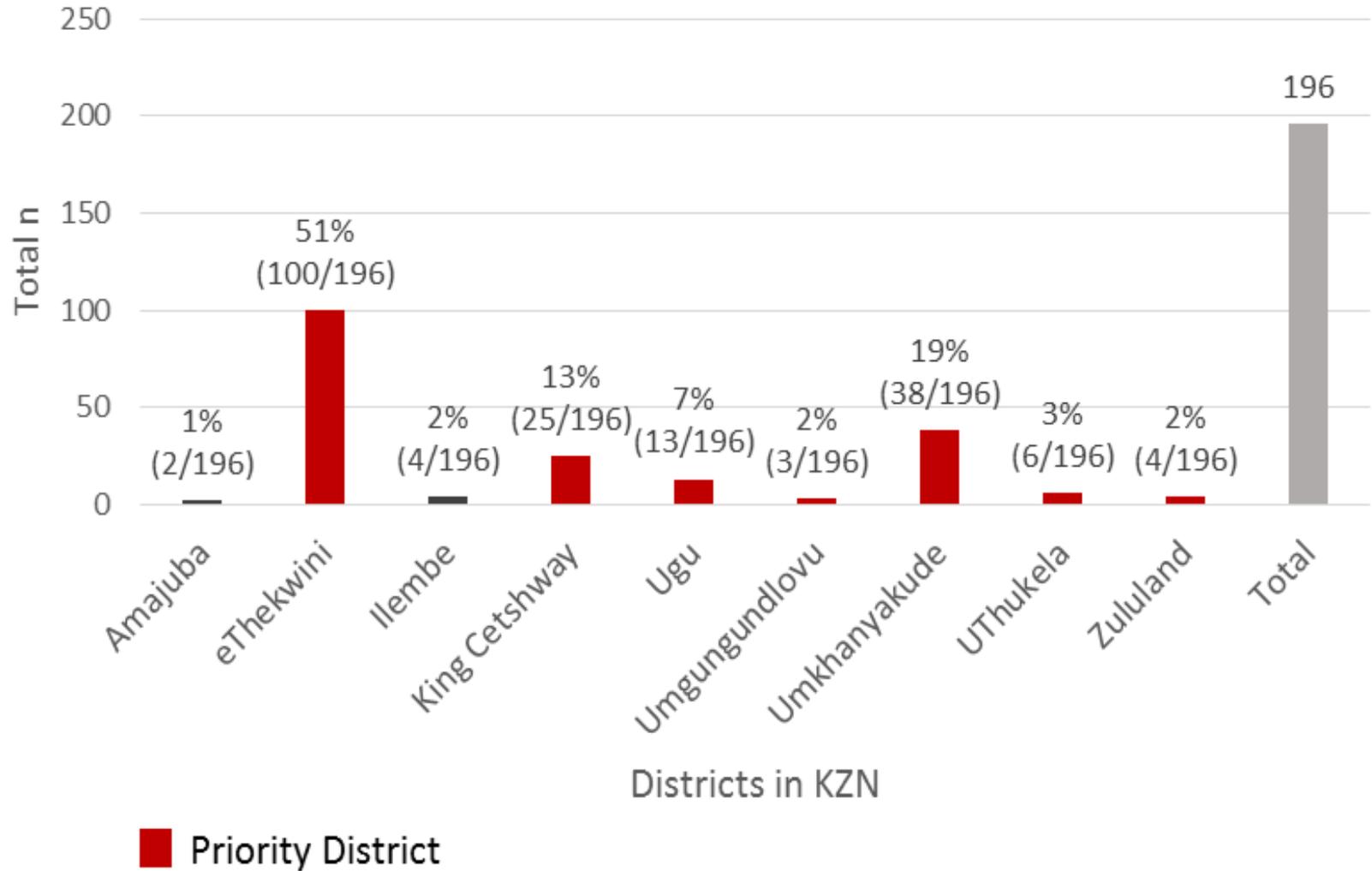
- HIV as a risk factor accounts for 50% of deaths in children under 5 years (CHIP, 2005)
- South Africa has the highest number of children living with HIV in the world:
 - 1 in 8 children are HIV infected
 - 320 000 (260 000 - 400 000) in children aged 0 to 14 years
 - 172 000 Children 0 to 14 years currently on ART (sub-optimal)

Paediatric Infectious Diseases Healthcare Worker Helpline

- Initiative between CAPRISA ACC & Paediatric Infectious Diseases Unit (PIDU) at King Edward VIII Hospital in KZN
- Designated helpline mobile phone → housed in PIDU & manned by a Paediatric Infectious Diseases Specialist or Registrar
 - I. Provide off-site specialist clinical support for complex cases in a resource limited setting
 - II. Improve identification, triage, up-referral and management of vulnerable populations failing ART
 - III. Identify and understand risk-factors for ART failure in the Paediatric population to improve outcomes
- **Study Aim:** Define the frequency of reported ART failure and investigate the profile of patients failing ART requiring expert consultation
- **Methods:** Retrospective Database Review of calls made from 3 Oct 2016 to 31 Aug 2017

Helpline Reach: All 11 KZN Districts

Proportion of Calls by District - KZN

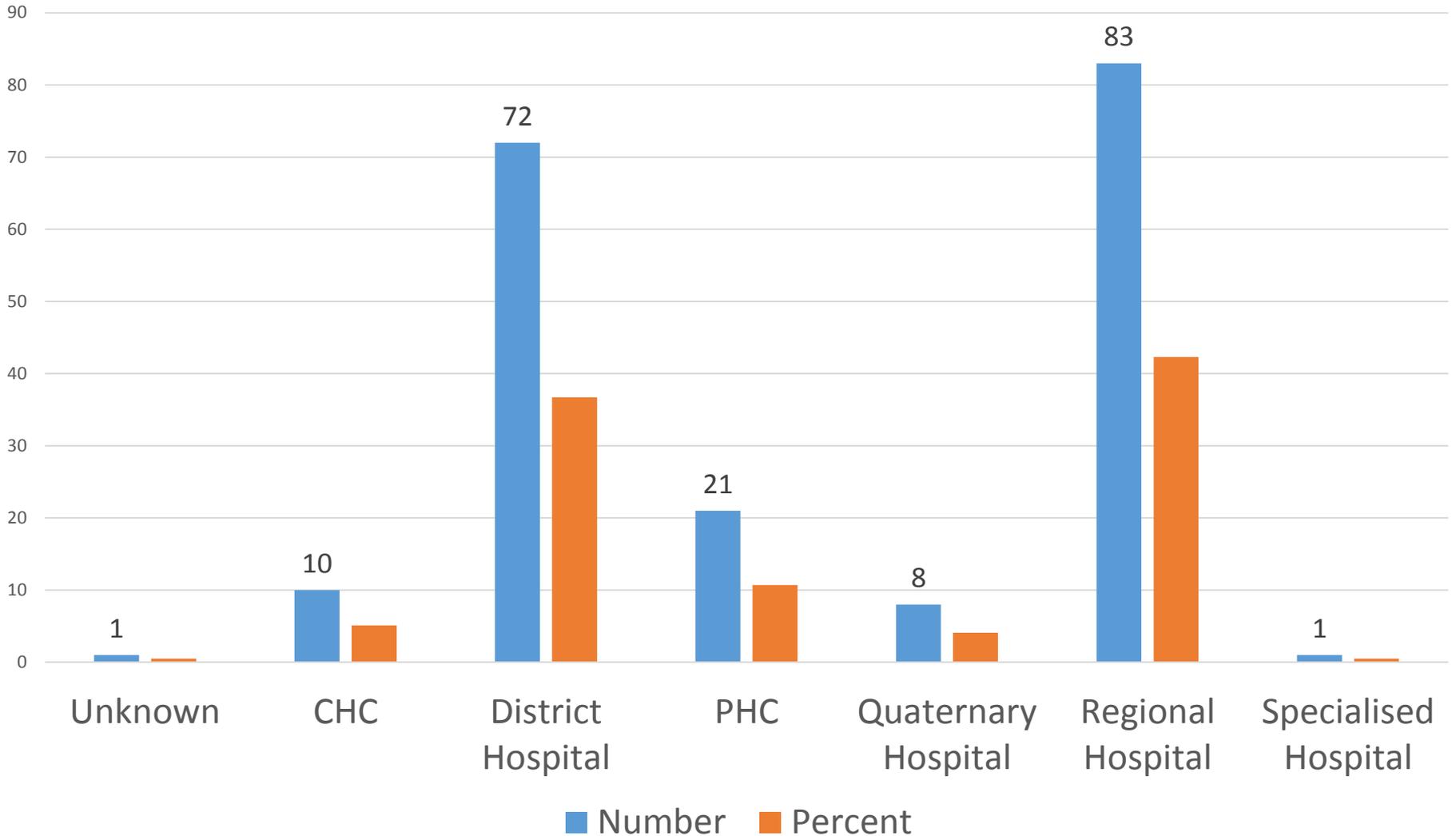


Helpline Reach: All 11 KZN Districts

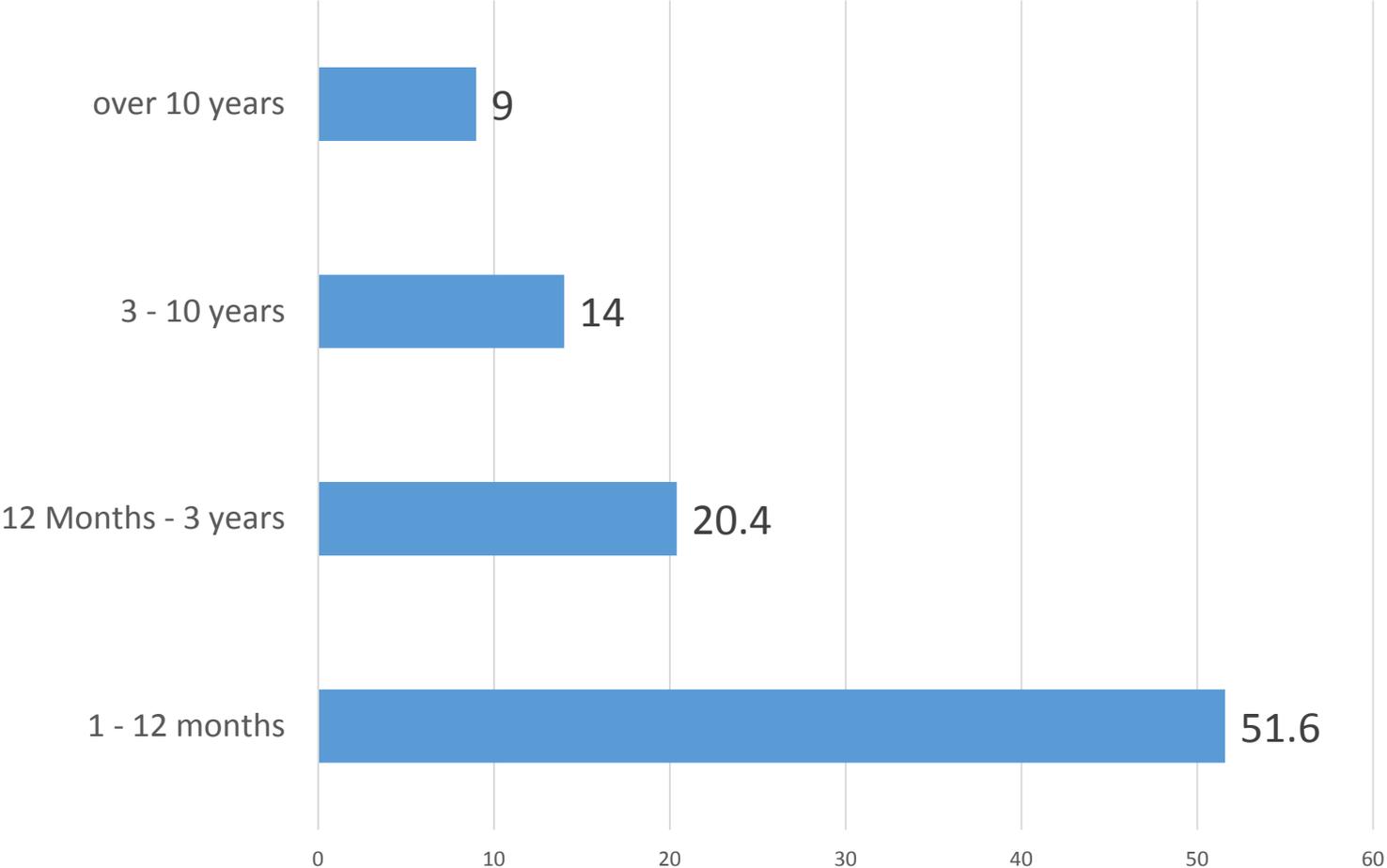


Helpline Reach: Level of Care

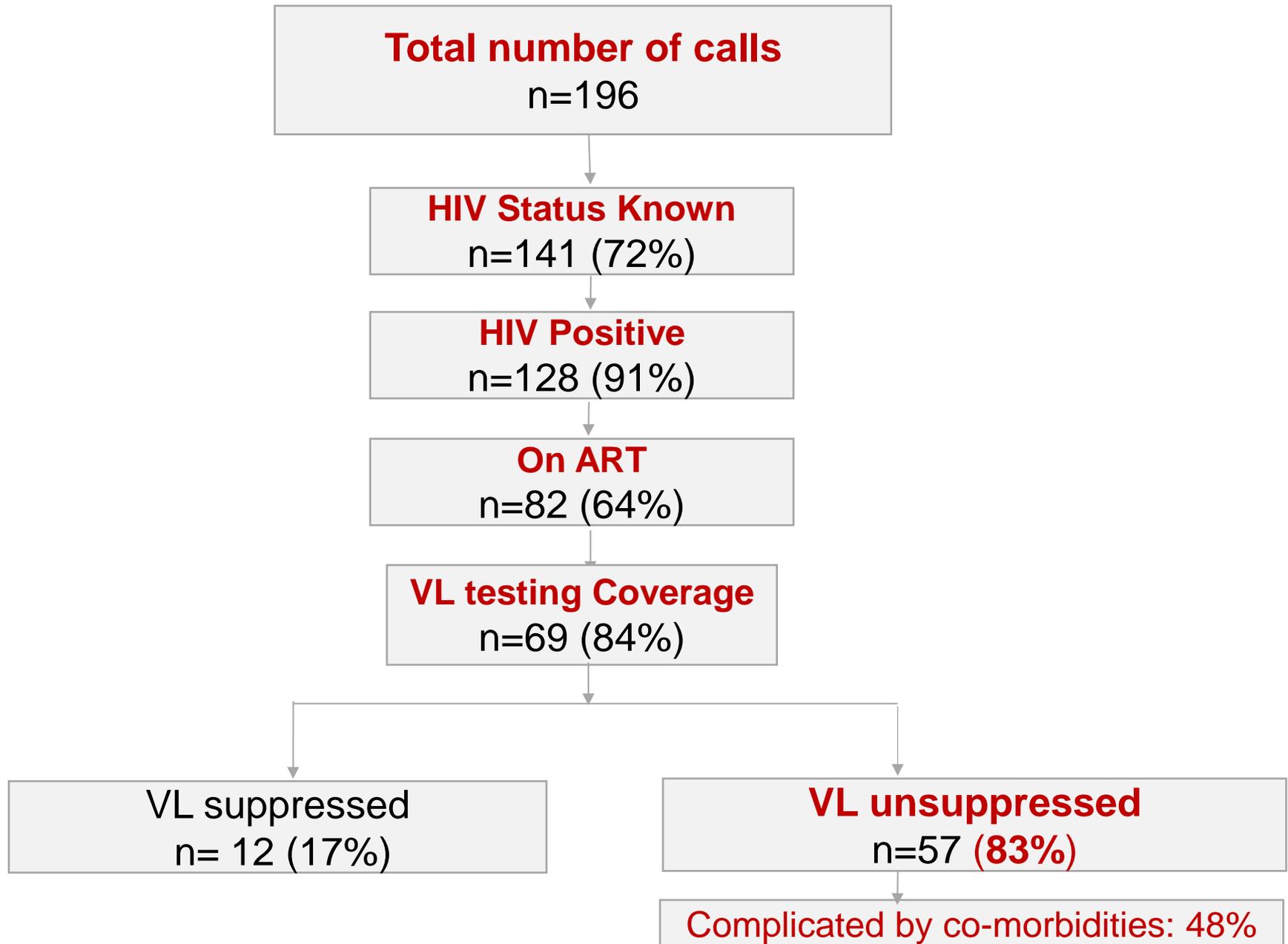
Facility Type



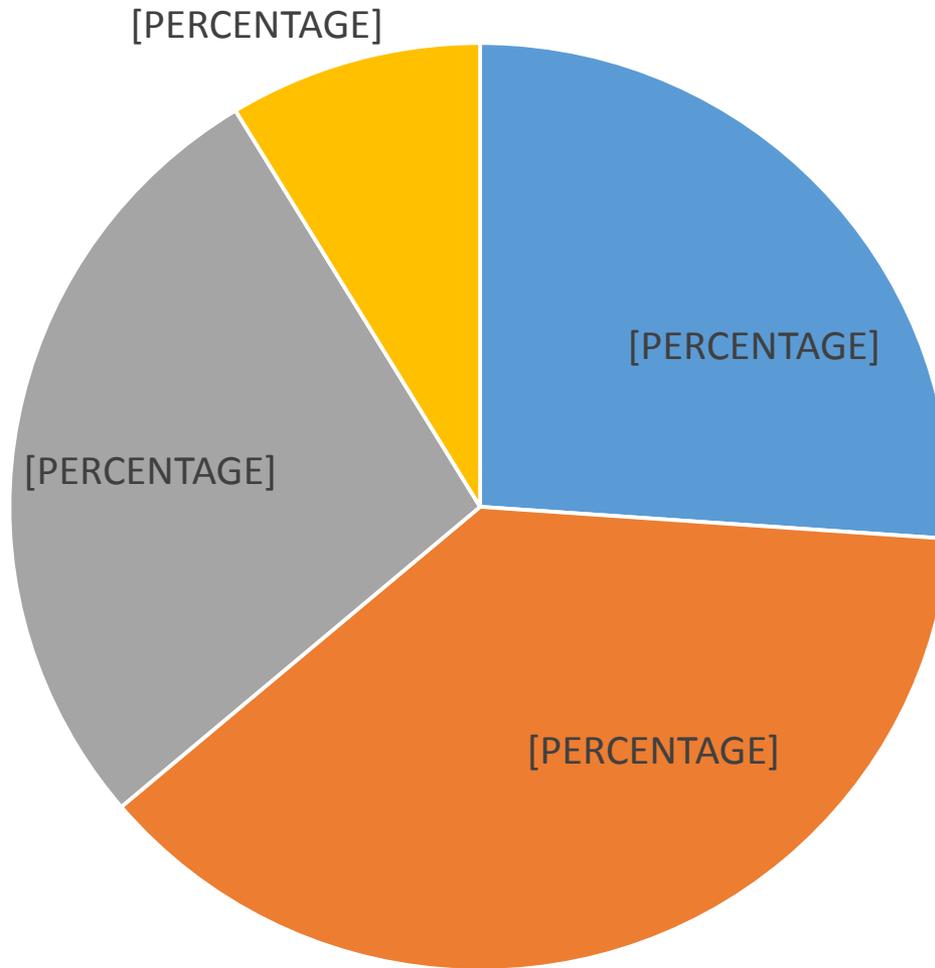
Helpline Calls: Patients Age Groups



Paediatric Helpline Database: HIV Cascade



Virologic Failure: Age Groups



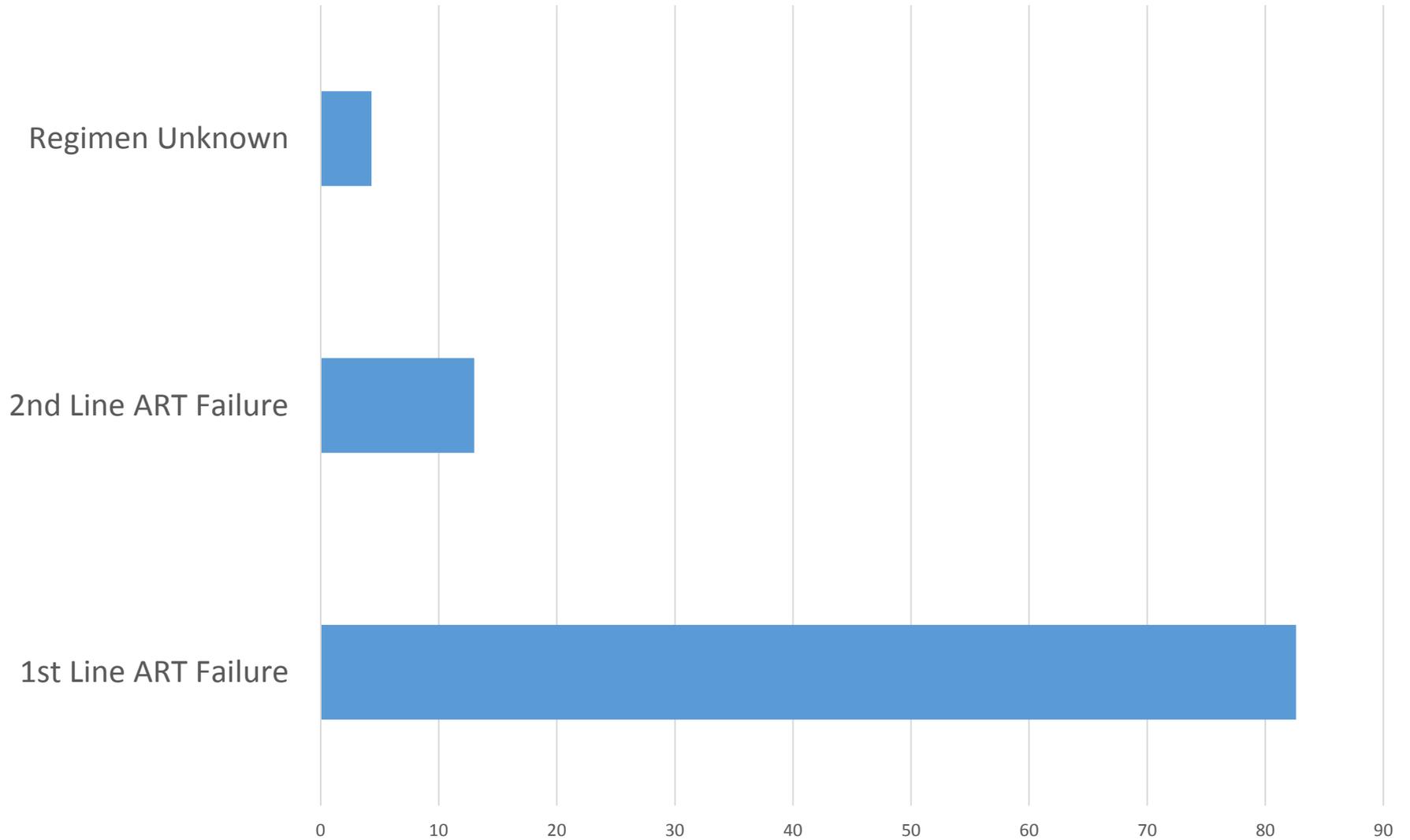
■ 12 Months - 3 years

■ 3 - 10 years

■ over 10 years

■ Age Unknown

Virologic Failure: Regimens



Clinical presentation of complicated ART failures

Co-morbidities	
Severe Acute Malnutrition	14 (20.3%)
Tuberculosis	9 (13%)
Moderate Acute Malnutrition	5 (7.2%)
Complex Respiratory Pathology	5 (7.2%)
Liver Disorders	4 (5.8%)
Non-liver GI Disorders	3 (4.3%)
Haematologic Abnormalities	2 (2.9%)
Infectious Pathology	2 (2.9%)
CNS Disorders	1 (1.4%)
Renal Pathology	1 (1.4%)

Summary

- Systems to support appropriate management of ART failure with complex co-morbidities are urgently required
 - Almost half of all patients had concurrent ART failure and complex comorbidity
- Helplines offer an effective mechanism to expedite up-referral of complicated patients
- ART failure rates among children < 10 years is alarming (> 60%)
- Malnutrition co-occurred in > 25% of cases with Virologic Failure
 - Severe Acute Malnutrition alone accounted for 20% of such cases
- Although the majority of virologic failure (VF) was for 1st line ART, protease inhibitors are often part of the baseline ART regimen in paediatric populations, and 2nd line ART failure was present in over 10% of cases in this cohort
- Clinical comorbidities and emerging ART resistance undermine clinical outcomes and have serious implications given limited access and availability of 3rd line ART in resource limited settings

Lessons Learned

- Impoverished settings have a high burden of Paediatric HIV and background co-morbidity
- Exceptionally high rates of virologic failure were observed in this cohort
- Systems to expedite early identification, triage, referral and management of vulnerable populations are critical to the success of the ART programme
- Healthcare worker helplines are feasible and efficient in achieving the above-mentioned in resource limited settings
- For SA to sustain gains made by the rollout of the ART programme, we need to optimize VL success
- Coaching/mentoring of clinician/nurses in VL failure clinics is critical

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