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Introduction

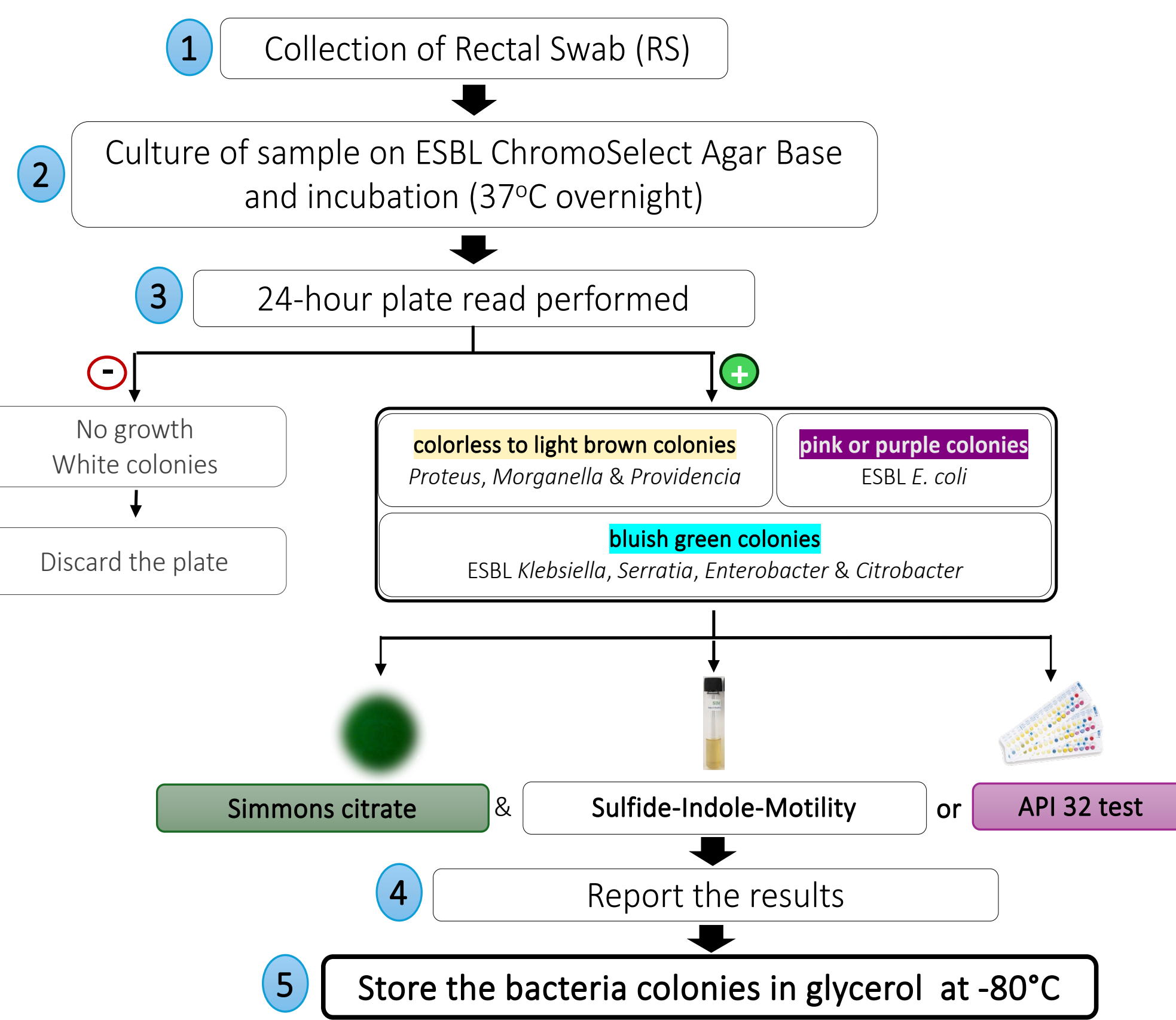
- Children living with HIV (CLHIV) are at increased risk of **severe bacterial infections**.
- Bacteria producing Extended-Spectrum Beta-Lactamase (ESBL) are associated with **longer hospital stays, increased healthcare costs, and higher mortality** that can occur after hospital discharge.
- The **appropriate selection of empirical antimicrobial therapy** for CLHIV who are readmitted after initial hospitalization is paramount to the management of these children.
- Data on ESBL-producing bacteria **colonization in African CLHIV** are scarce, bridging this gap in data may help better address this possible cause of readmission and death.

Objective

- Describe the **prevalence of ESBL-producing bacteria colonization in CLHIV at discharge** in four African countries (Mozambique, Uganda, Zambia, Zimbabwe) across the SUPPORT study network.

Methods

- Cross-sectional study**, included in a EDCTP3-funded project (SUPPORT-GA101145811).
- Rectal swabs** for hospitalized CLHIV aged between 1-59 months were collected at discharge between Nov-2025 and Mar-2026, to evaluate colonization rates of ESBL-producing bacteria.
- Figure 1 (right)** shows how samples were analyzed.



Results

- A total of **76 CLHIV** were included with rectal swabs collected in this interim analysis. The median age was 17.8 months [IQR 10.7–27.7]; 44 (57.9%) were male, 31 (40.8%) had started ART before admission.
- Median length of **hospital stay** was 9.0 days [IQR 7.0–14.8], and 74 (97.4%) received **antibiotics** during admission.
- Median **CD4%** was 21% [IQR 12.8–30.5] and median **HIV viral load** was 322,000 copies/mL [IQR 7,745–2,341,846].
- Table 1** below shows the **colonization** of these patients (76, 92.1%), with ESBL-producing bacteria by country.

	Mozambique	Uganda	Zambia	Zimbabwe	TOTAL
Participants	30	22	15	9	76
With ESBL	26	20	15	9	70
Prevalence	86.7%	90.9%	100%	100%	92.1%
>1 ESBL bacteria # (%)	16 (61.5%)	13 (65.0%)	14 (93.3%)	3 (33.3%)	46 (65.7%)

- Clinical characteristics** were similar between colonized and non-colonized patients with no significant differences in ART treatment (p=0.742), days of admission (p=0.103), antibiotics prescribed (p=1.000), HIV viral load and cotrimoxazol prophylaxis (p=0.210).
- Table 2** below shows the bacteria isolated with *E. coli* the most prevalent overall, found in (54, 42.9%) of colonized patients.

Bacterial species	Mozambique	Uganda	Zambia	Zimbabwe	TOTAL	(%)
<i>E. coli</i>	18	19	14	3	54	42.9%
<i>K. pneumoniae</i>	10	16	15	2	43	34.1%
<i>S. paucimobilis</i>	4	0	0	0	4	3.2%
<i>E. aerogenes</i>	0	0	0	4	4	3.2%
Other species*	16	2	0	3	21	16.7%
Total	48	37	29	12	126	100%

**C. koseri*, *C. farmeri*, *C. youngae*, *E. cloacae*, *E. hormaechei*, *K. oxytoca*, *P. shigelloides*, *P. fluorescens*, *R. terrigena*, *Shigella* spp., and *Salmonella enterica* ssp. *arizonae*.

Conclusions

- The prevalence of ESBL-producing bacterial colonization in CLHIV at discharge is **concerningly high**.
- The **SUPPORT project** will assess the correlation between colonization with ESBL-producing bacteria and **post-discharge mortality** or other adverse outcomes including **hospital readmission**.
- Results may help inform clinicians and policy makers on **empiric antimicrobial therapy** for CLHIV during hospitalization and readmissions.

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