

# Digitizing Incidence of Orofacial Cleft at a Multidisciplinary Orofacial Cleft Center in Ghana

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## Purpose

- Orofacial cleft care in sub-Saharan Africa has historically relied on international collaboration. This study aims to incorporate a digital database into regular practice at a multidisciplinary orofacial cleft clinic.
- We aim to demonstrate the utility of this method in promoting accessible, indigenous record collection in our program.

## Methods

- The multidisciplinary cleft clinic at the Komfo Anokye Teaching Hospital, Kumasi, Ghana developed a REDcap form to digitally collect demographic and clinical data on new presentations to the clinic.
- Data were collected retrospectively between April 2021 and April 2022 and prospectively between May 2022 and April 2023.
- A basic analysis of incidence data was conducted.

## Results Summary

- A total of 116 new patients with cleft were recorded in the clinic during the study period.
- Median patient age was 3 weeks and ranged between 1 week and 56 years over the entire cohort.
- Diagnosis included: 59 (52.2%) patients with isolated cleft lip, 31 (27.4%) with cleft palate, and 23 (20.4%) with cleft lip and palate.
- Cleft lip presented unilaterally in 46 (78%) patients and was incomplete in 25 (42.4%) cases.
- 52.6% of patients was female and 47.4% male.
- The ratio of left *versus* right unilateral cleft was 1.09 in males and 2.2 in females, although the association between patient gender and cleft lip laterality was only borderline significant ( $P = 0.08$ ).

**Table 1.** Demographic and Clinical Characteristics.

Variable	Frequency N (%)
Age (median, IQR) Weeks (N = 110)	3 (1-12)
Age category (N = 110)	
Infant ( $\leq 12$ mo)	85 (77.2)
Adult ( $\geq 18$ y)	2 (1.8)
Sex (N = 114)	
Male	54 (47.4)
Female	60 (52.6)
Region of origin (N = 89)	
Ashanti	61 (68.5)
Bono	7 (7.9)
Western	6 (6.7)
Ahafo	4 (4.5)
Bono East	4 (4.5)
Primary diagnosis <sup>a</sup> (N = 113)	
Isolated cleft lip	59 (52.2)
Isolated cleft palate	31 (27.4)
Cleft lip and palate	23 (20.4)
Atypical cleft (Tessier)	0 (0)
Cleft lip severity (N = 59)	
Unilateral cleft lip	46 (78.0)
Incomplete	23 (50.0)
Complete	23 (50.0)
Bilateral cleft lip <sup>b</sup>	13 (22.0)
Incomplete	2 (23.1)
Complete	11 (84.6)
Unilateral cleft lip laterality (N = 40)	
Unilateral left cleft lip	23 (57.5)
Male	12 (52.2)
Female	11 (47.8)
Unilateral right cleft lip <sup>c</sup>	17 (42.5)
Male	11 (64.7)
Female	5 (29.4)
Alveolar cleft presentation (N = 15)	
Isolated alveolar cleft	1 (6.7)
With isolated cleft lip	13 (86.7)
With cleft lip and palate	1 (6.7)

<sup>a</sup>One patient presented with isolated alveolar cleft, and was thus not included in the list of primary diagnoses.

<sup>b</sup>One patient with bilateral cleft lip presented with incomplete cleft of one laterality and complete cleft of the other; they have been included only under "complete" bilateral cleft lip.

<sup>c</sup>One patient was excluded as data on gender was not provided.

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## Conclusion

- Our experience incorporating a digital database into a multidisciplinary cleft palate clinic was positive, with rapid uptake and ease of use.
- We believe that such approaches are pivotal to continued development of indigenous African orofacial cleft palate centers.
- Continued use of this approach will further validate it and improve outreach to patients at Komfo Anokye Teaching Hospital.