

## LONG ABSTRACT

### **Innovative 'informal' mhealth: How are community health nurses utilizing their mobile phones to improve healthcare delivery in Ghana?**

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'Mobile phone for health' (mHealth) has been touted as the panacea for bridging healthcare gaps in resource-poor areas in most developing countries. While much research has focused on formal mhealth initiatives, little is known about what community health nurses in Ghana are doing with their own mobile phones (informal mHealth), and with what implications for healthcare. Using a mixed-method approach, we collected data from 598 community health nurses from 15 districts in three regions, representing three ecological zones in Ghana. In addition, relevant national stakeholders were interviewed while nine FGDs were held across the three regions. It was found that there is virtually no existing formal mHealth programmes in the selected health facilities. Meanwhile, community health nurses in Ghana are using their own mobile phones and airtime to facilitate healthcare delivery, and saving lives in critical emergency situations. Thus, their mobile phones facilitate arrangements for ambulances, medicine supplies, and referral cases, as well as communication with colleagues, superiors, and patients (Figure 1).

## UNOFFICIAL APPLICATIONS

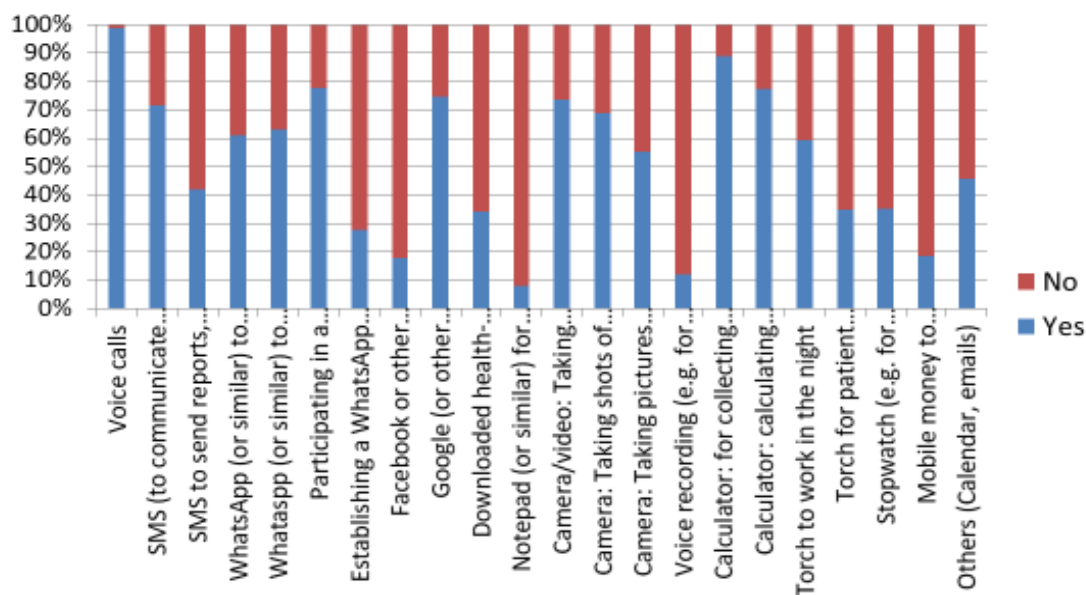


Figure 1: Unofficial mHealth applications,  
Source: Fieldwork, 2019

However, most CHNs (especially those in rural areas) face several challenges in the use of their mobile phones for healthcare delivery such as poor network coverage, inadequate battery charging facilities, inadequate phone credits, and unwanted calls at odd hours (see Tables 1 and 2).

**Table 11: Cost of airtime**

Amount (GH¢)	N	%
None	4	0.67
1.00-10.00	535	89.45
11.00-20.00	46	7.70
21.00-30.00	10	1.70
31.00-40.00	1	0.17
41.00-50.00	1	0.17
No response	1	0.17
<b>Total</b>	<b>598</b>	<b>100.0</b>

Source: Fieldwork, 2019

## Weekly estimated cost of data bundle for work-related purposes

**Table 2: Cost of data bundle**

<b>Amount (GH¢)</b>	<b>N</b>	<b>%</b>
None	14	2.7
1.00-10.00	436	72.91
11.00-20.00	35	5.85
21.00-30.00	17	2.84
31.00-40.00	2	0.33
41.00-50.00	6	1.00
No response	88	14.72
<b>Total</b>	<b>598</b>	<b>100.0</b>

**Source: Fieldwork, 2019**

In collaboration with the Ministry of Health and Ghana Health Service, we seek to use our evidence base to inform policy and practice on the use of personal mobile phones for healthcare delivery in Ghana.