



# Portable Health Clinic

An Affordable, Usable and Sustainable Telehealth System for Unreached Communities



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# Bangladesh: As a model of the Developing World

## ◆ 70% people live in rural areas but...

### Poor Healthcare Facilities in Village

- Insufficient hospital and clinic
- Absence of qualified doctors and nurses

### ◆ Solution?

- (1) **Telemedicine with remote doctors from the cities and the village health workers**

## ◆ Poor Doctor-Patients Ratio

7 doctors and 3 nurses & midwives for 10,000 people

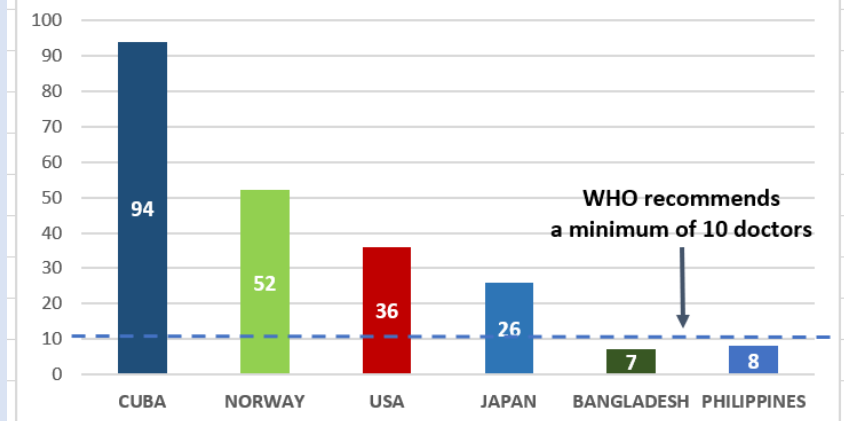
### ◆ Solution?

- (2) **Reduce number of patients b by introducing preventive healthcare**



Village Health Sub-Center

No. of Doctors per 10,000 Population (2023)

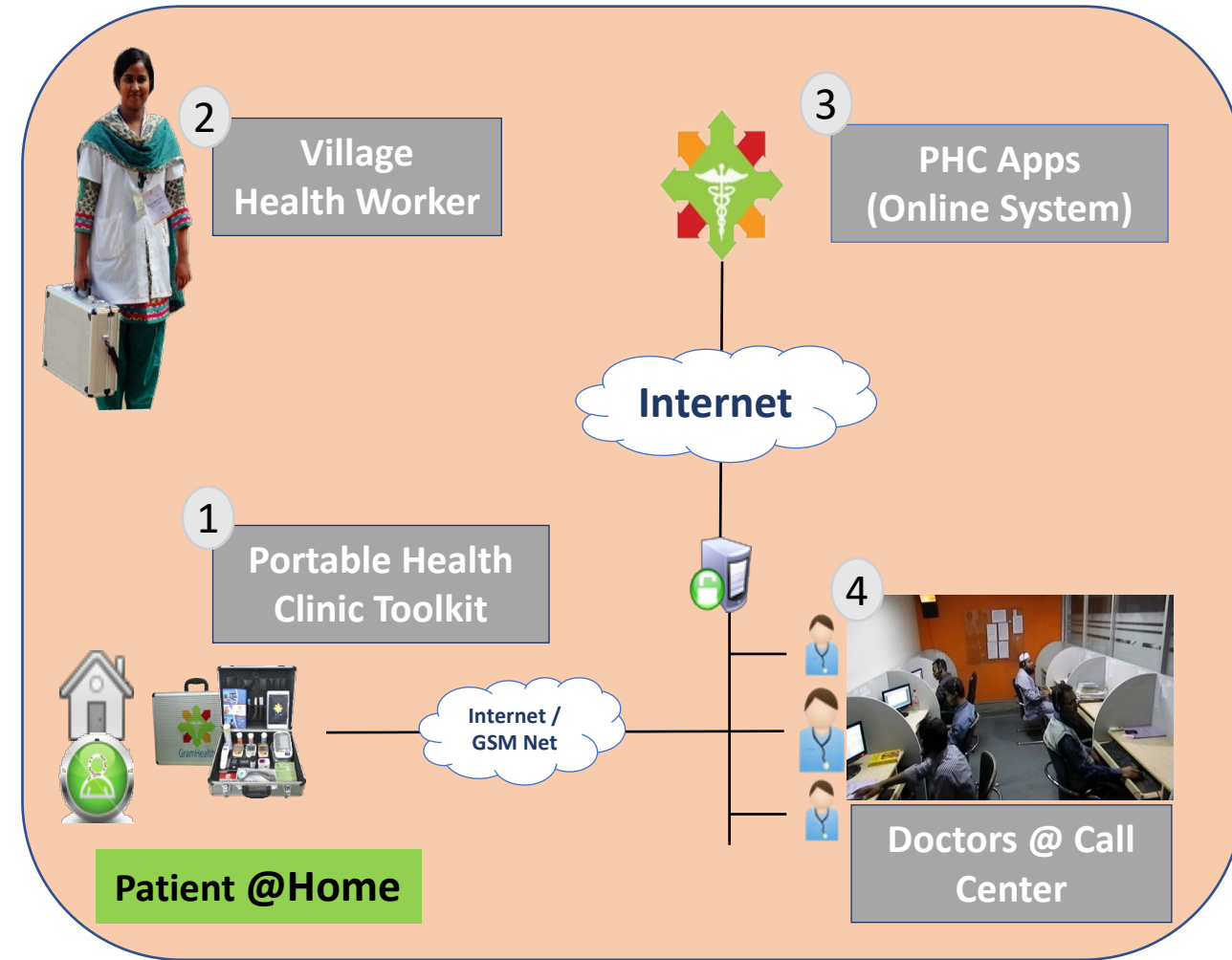


# Portable Health Clinic (PHC)?

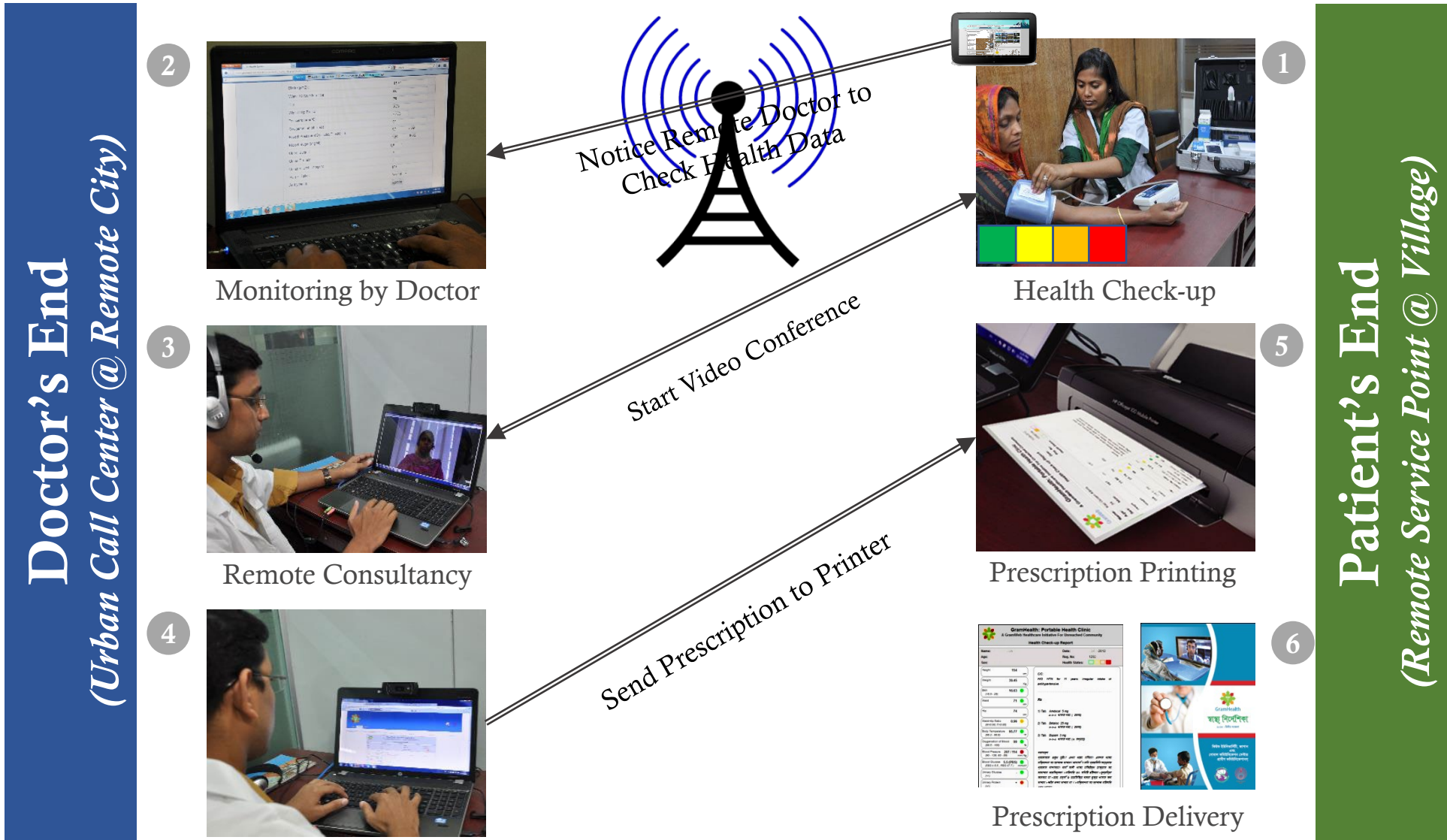
It's a **telehealth** system for **unreached** communities with **preventive care** in a **population management** approach.



Basic PHC Module with NCD



# Portable Health Clinic



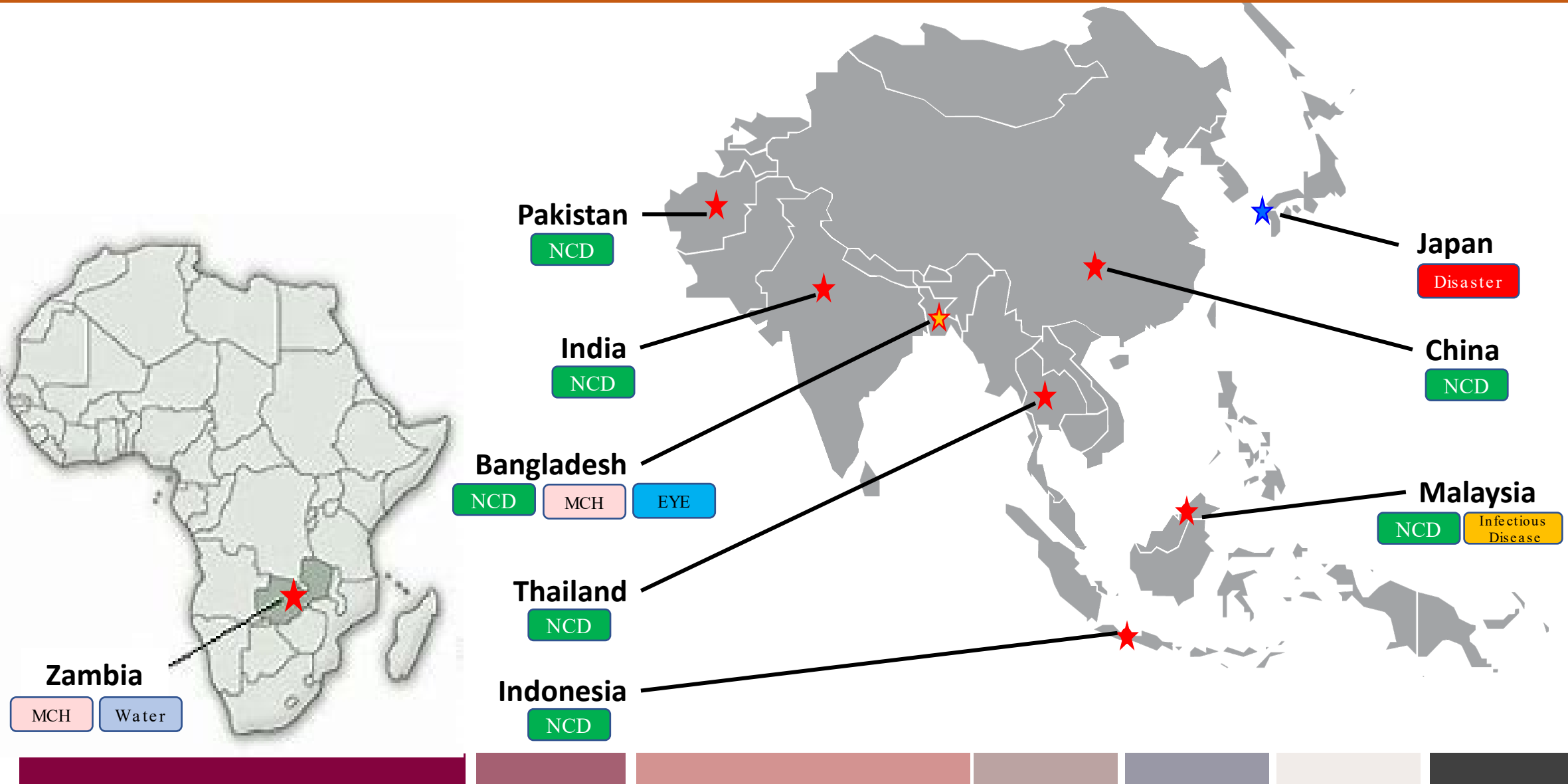
# PHC System Application

## Electronic Medical Records (EMR/PHR)

Date	Phase	Height	Weight	BMI	Waist	Hip	W/H Ratio	B. Temp.	SpO2	B.P.	B.G.	B.H.	U.G.	U.P.	U.U.	P.R.	Arr.	Color	Pres.	Edit
2012-10-02 03:18:54	1	156	47.7	19.6	72	80	0.9	97.05	98	215 / 87	7.22	0	+-	-	+	82	Normal	●	Print	👁
2012-12-03 04:49:00	2	156	47.75	19.62	73	81	0.9	96.8	98	191 / 97	7.67	0	-	-	+	90	Normal	●	Print	👁
2013-09-08 14:36:15	1	155	46.9	19.52	76	86	0.88	96.87	99	210 / 96	7.61	0	-	+	+	79	Normal	●	Print	👁

- |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1) Body Temperature</li> <li>2) Blood Pressure</li> <li>3) Pulse Rate</li> <li>4) Arrhythmia</li> <li>5) Height, Weight and BMI</li> <li>6) Waist, Hip and W/H Ratio</li> <li>7) Oxygenation of Blood</li> </ol> | <ol style="list-style-type: none"> <li>8) Blood Glucose (random)</li> <li>9) Blood Grouping</li> <li>10) Urinary Sugar</li> <li>11) Urinary Protein</li> <li>12) Hemoglobin</li> <li>13) Cholesterol (total)</li> <li>14) Uric Acid</li> </ol> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# Global Expansion of the PHC Services



# Comments

- ◆ PHC is a *cost effective* and *simple technology* telehealth.
- ◆ *Home delivery service* can ensure maximum *participation in healthcare*.
- ◆ The simple technology makes it **easily replicable** to any limited-resource country.



**Thank you very much.**

どうもありがとうございます。

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