Using human-centered design approaches to develop innovative models for the delivery of essential health services in three Philippine rural communities during the COVID-19 pandemic

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Background

Reductions in outpatient care attendance owing to lower demand were reported by 76% of countries, with other factors such as lockdown restrictions (48%) and financial difficulties (33%) also mentioned.

- WHO, 2020
Methods
Methods

DESIRABILITY
What do people desire?

FEASIBILITY
What is technically and organizationally feasible?

VIABILITY
What can be financially viable?

The solutions that emerge at the end of the Human-Centered Design should hit the overlap of these three lenses; they need to be Desirable, Feasible, and Viable.
Methods

**Journey Mapping**
- mapping the patient and provider’s journey

**World Cafe**
- Idea generation to address the identified pain points in a patient’s journey

**Prio Grid**
- Ranking of ideas to identify high-impact, high-value interventions
# Methods

- **Patient symptom and duration:** [Insert symptom and duration details]
- **Date of Consult:** [Insert date]
- **Location:** [Insert location]
- **New patient?** Yes [ ] No [ ]

<table>
<thead>
<tr>
<th>Phase</th>
<th>Before Consult</th>
<th>During Consult</th>
<th>After Consult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-phase</td>
<td>Symptom Onset and finding a health facility</td>
<td>Testing (Laboratory, X-ray, etc.)</td>
<td>Diagnosis and consultation (Doctor’s consultation)</td>
</tr>
<tr>
<td>People Involved</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Duration (Mins, hrs, days)</td>
<td></td>
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<tr>
<td>Emotional State (-10 to +10)</td>
<td></td>
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<td></td>
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<tr>
<td>Location (RHU, SHW, Hospital, home, etc.)</td>
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<td></td>
<td></td>
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<tr>
<td>Positive experiences</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pain points</td>
<td></td>
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<tr>
<td>Insights/narratives</td>
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</tbody>
</table>

**Journey Mapping**

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**The Global Health Network Conference South Africa 2020**
## Methods

**Rows**
- People Involved/ Setting
- Duration
- Emotional State (-10 to +10)
- Positive Experiences
- Pain Points
- Insights/ Narratives

**Columns**
- Before Consult
  - Symptom Onset and finding a health facility
  - Scheduling and Travel to health facility
- During Consult
  - Testing (Laboratory, X-ray, etc.)
  - Diagnosis and consultation (Doctor’s consultation)
- After Consult
  - Recovery
  - Maintenance (follow-up and accessing medications)
**Figure 1. Patient Journey Map**

### Methods

**Phase**
- **Pre-Surgery**
  - Registration
  - Waiting
  - Preparing for surgery
  - Consultation
  - Receiving anesthesia

**During Surgery**
- Time-out
- Undergoing surgery
- Debriefing
- Recover from anesthesia

**Post-Surgery**
- Final check-up

**Stakeholders**
- Patients
- Surgeons
- Anesthesiologists
- Nurses

**Duration**
- Pre-Surgery: 5-10 min
- Waiting: 10 min
- Preparing for surgery: 1 hr
- Consultation: 5 min
- Receiving anesthesia: 30 min
- During Surgery: 2 hr
- Debriefing: 45 min
- Post-Surgery: 2 hr

**Emotional State**
- Entrance: Happy
- Waiting room: Neutral
- Day unit: Happy
- Daily room: Neutral
- Recovery room: Neutral
- Daily room: Neutral

**Location**
- Entrance
- Waiting room
- Day unit
- Daily room
- Operating room
- Recovery room
- Daily room

**Description**
- The waiting room was located in the main hall. Patients waiting for surgery go directly to the day hospital department.
- In this room, the patient changes in the hospital dressing gowns.
- During the consultation, the surgeon talks to the patient and discusses the procedure. In addition, the patient receives signatures from the patient that are required.
- The operating room is a room just before the OR. This is where the patients receive their assignments.
- During the time-out, the surgeon talks to the patient about the surgery he or she is about to perform. The patient is checked for any allergies.
- The operating room is a sterile environment.

**Insights**
- Preparation time in the OR was quite long, when patients were already inside.
- A large nurse cutter was used for the preparation.
- Some patients were so nervous that they fell asleep.
- Patients were anxious than expected.
- Actual surgery only took a small part of the entire time inside the OR.
- Patients were talked to more heavily injured patients.
- Visitors can enter the room.
- Patients become more anxious seeing other patients with heavier injuries.
Methods

World Cafe

1. Group into four people per group.
2. Choose a station, and discuss the assigned question for 20 minutes.
3. Change station once the time is up.
4. Synthesize your key ideas once all stations have been visited.
5. Write the key ideas and activities in a post-it note, and place in the board.
Telehealth Use case:
Known patient, on meds for Hypertension and Diabetes

Referral Format
- Pangalan Lugar
- EKSAM
  - E: Edad
  - K: Kasarian
  - S: Simtomas
  - A: Allergy
  - M: Medical History/ Meds
- VS (Vital Signs)
  - BP, HR, RR, O2, Temp, Pain
Results and Conclusions

Suggested use cases for teleconsultations:
• follow-up of patients living in far municipalities previously admitted to the tertiary/ end-referral hospital
• follow up on patients within the municipality with stable chronic disease
• consultation of non-emergent cases
• scheduling of in-person consultation

Health system adaptations observed during the pandemic:
• Pasabuy (community-led consolidated drug purchasing)
• Informal teleconsultations
• Expanded roles of BHWs and Nurses
• Increased participation of private practitioners in public health
Challenges and Recommendations

Restricted mobility to conduct on-site research:
- Hiring local personnel to conduct the interviews

Premature disengagement of stakeholders:
- Properly involve and seek approval from local and regional officials
- Always keep a list of alternative eligible sites

Scope Creep:
- Regularly align funders to the initially agreed-upon goals and objectives before initiating the project.
- Consistency to deliver > Magnitude of the project
People naturally know how to improvise in trying to attain their needs and desires. It is up to the researcher to recognize these innovations and facilitate their integration into local health systems.
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