

MATERNITY WARD FOR LOW-RESOURCE SETTINGS

Sandman, H., Meguid, T. & Levänen, J. (2020, forthcoming). Enabling Empathy and Empathy as an Enabler: Architectural design for maternal health.

BACKGROUND

Lab.our ward was a cross disciplinary innovation project to design novel maternity ward services, products and spaces that were based on women's and care providers' needs. The project was executed by a social impact company, Scope (former M4ID), and funded by the Bill and Melinda Gates Foundation. The focus was on low-resource settings. Background research and prototyping was done in Zanzibar, Tanzania, Odisha, India and in Uganda. The overall objective of the project was to reduce maternal and infant deaths in low-resource settings through design solutions.



THE CHALLENGE

Healthcare facility buildings can be conduits for (or, if designed poorly, obstacles to) appropriate, therapeutic healthcare. Improvement of the quality of care in maternity healthcare facilities guarantees an end to preventable birth-related deaths and disabilities (Maaloe et al., 2016).

Currently women in low-income countries deliver without deprived of their dignity and with no privacy or consideration of their need for emotional support. Additionally, women are often treated without sensitivity or empathy (Meguid and Mgbako, 2011).



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THE PLAN

Striving to respond to this challenge, M4ID formed three design teams, one on architecture, led by Helena Sandman, another on services, and a third on products. All design teams, within their particular fields, aimed to find solutions that would enable smoother and safer maternal and new-born birth experiences and support the ability of the delivering mothers to be proactive. Further aims were to conduct a locally anchored inclusive design process that would result in spatial design enabling empathic encounters and actions.



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PROTOTYPES

Two prototype facilities were planned during the project phase, one in Kivunge, Zanzibar, Tanzania and another in Basta, Odisha, India. In both Tanzania and India, the interventions were done considering local circumstances and potentials. The situation of the maternal healthcare sector was similar: quality of care could be improved; levels of hygiene were often low; health-care facilities were crowded; and

mothers and expectant mothers lacked possibilities to influence. However, even if from a clinical point of view, the actual birthing process is the same, there were varying cultural traditions, divergent norms, and dissimilar health-care systems to take into account. The design proposal for Zanzibar has not yet been constructed, while refurbished facility in Basta was taken into use on the 15 December 2018.



PASSIVE DESIGN STRATEGIES

3. NATURAL VENTILATION *Courtyards as cooling agents*

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Courtyard as source of light and as moderator of internal climate. It reduces the depth of the building, improving ventilation.

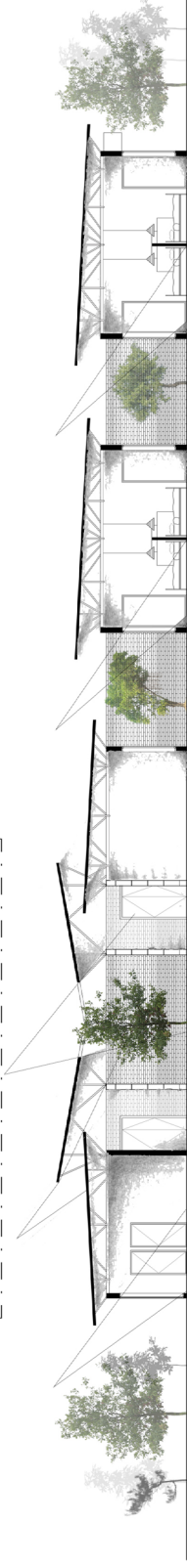
Cross Ventilation is crucial to effective and appropriate air renovation



3. NATURAL LIGHT

Minimize use of artificial light

Section: angle of the light coming in through windows and where it reflects

[illegible]

PASSIVE DESIGN STRATEGIES

4. RAINWATER HARVESTING + GREEN WALL
Secondary resources and systems

Rainwater Harvesting

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Green Wall

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Roof overhangs are a good opportunity to harvest rainwater

Additional vegetation around the building creates more shade, contributing to a cooler perimeter

Water tanks around the the building or inside the courtyards can collect rainwater during wet season

