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Community Hospital of the Future: Design Thinking Approach to Care Redesign and Whole Health System Efficiency

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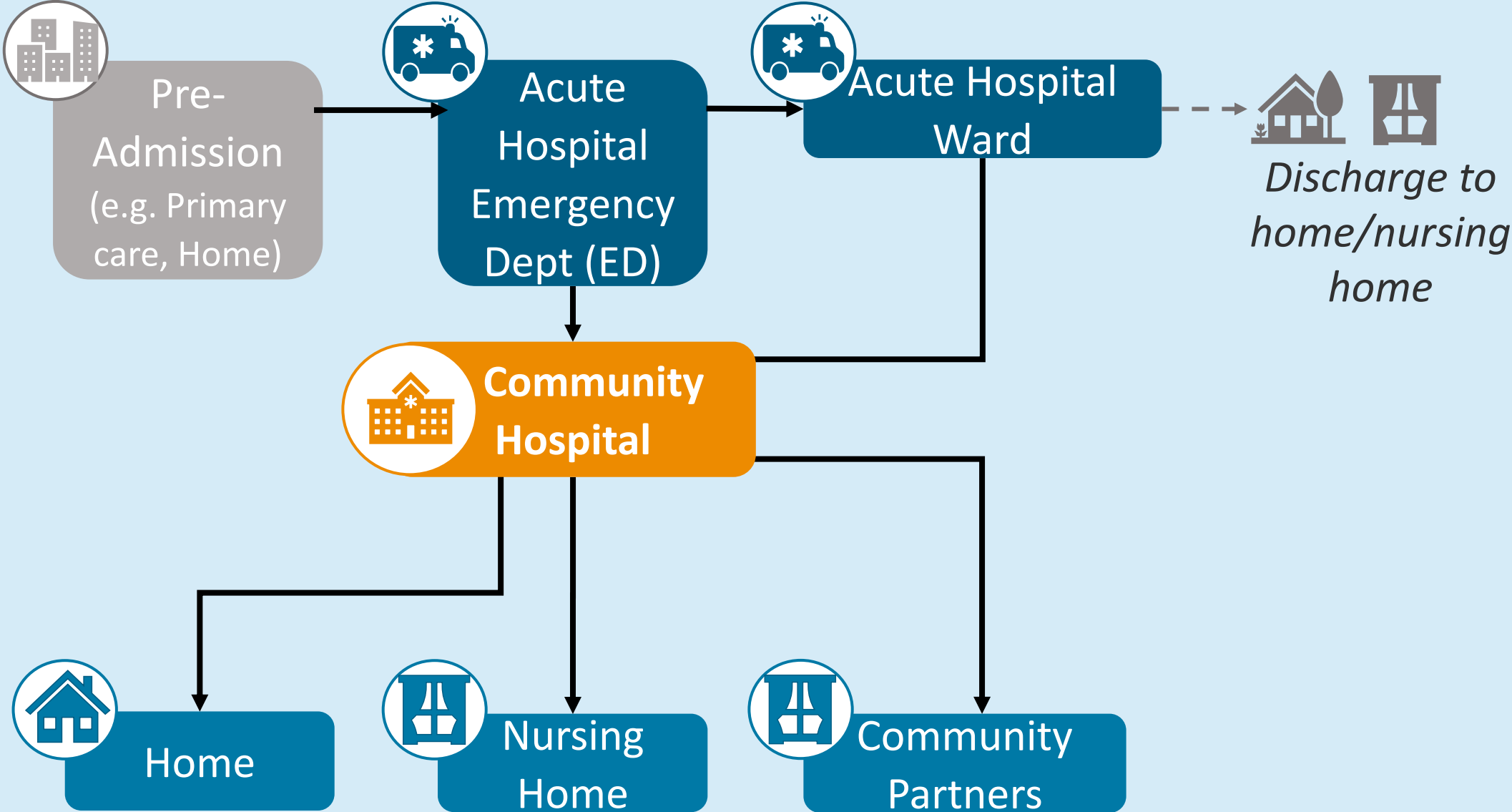
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INTRODUCTION

Acute hospitals (AH) are under demand-sided strain due to an ageing population. Shortages in manpower and inefficiencies in patient flow hinder AHs from meeting this demand. Many patients could be managed in community hospitals, instead of acute hospitals. Optimising this patient flow would alleviate the strain that AHs are facing.

Figure 1: System level care flow



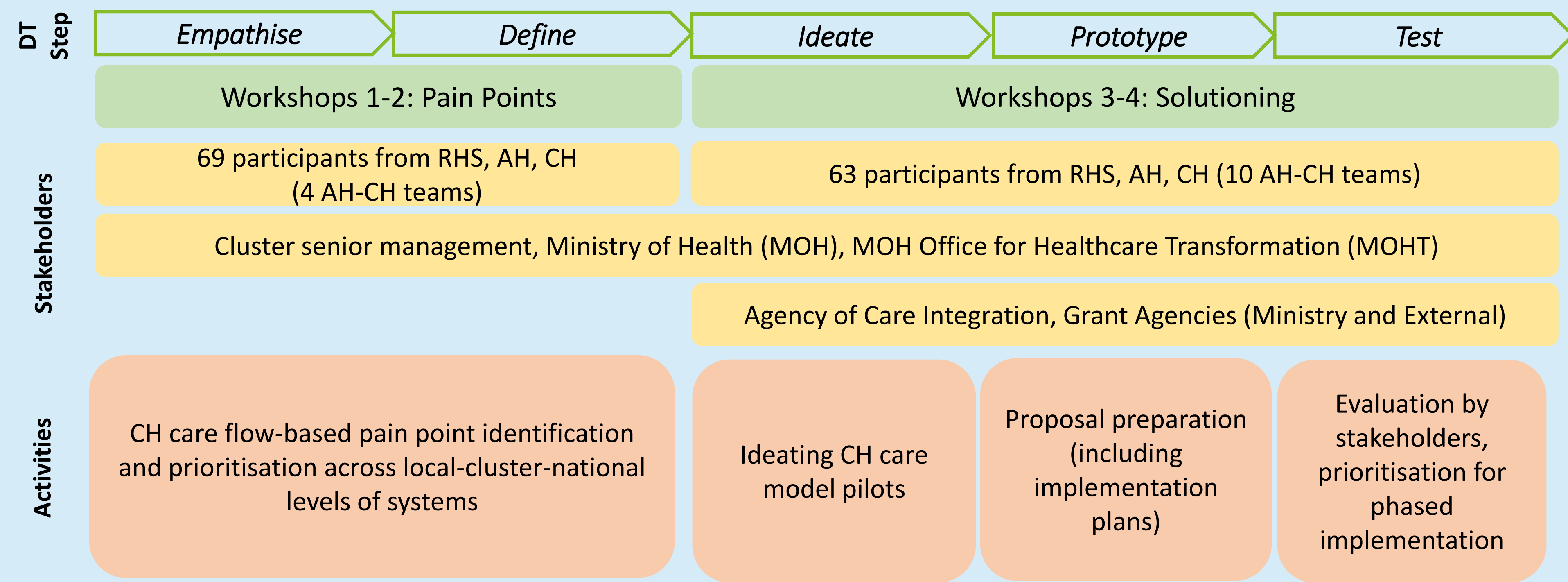
AIM

We embarked on a project to co-create redesigned community hospital care models with healthcare system stakeholders to optimize flow into and out of the community hospitals.

METHOD

We organized four design-thinking (DT) workshops to engage 102 stakeholders across the 3 regional health systems (RHS). Participants had diverse clinical and administrative functions across the health system, with differing levels of seniority.

Figure 2: Design-thinking was employed through workshops to engage stakeholders to redesign CH care models.



Future work includes further iteration of prototyping and testing where proposals will be refined, piloted and evaluated, with subsequent scaled implementation.

RESULTS

Results from Workshops 1-2 (Pain Points)

Table 1: The 6 most significant unique pain points identified mostly required national level action (policy deconstraining) before they can be solutioned at the cluster/local level. These 6 pain points had higher average pain scores across the RHSes than the overall average (i.e. >2.9). Scores were from 1 (least painful) to 4 (most painful).

No.	Pain Point	Ave. Pain Score	Level of Action
2	Patients entering the system through ED rather than CH/poorly utilized direct admission pathways	3.3	National
5	Increased patient complexity and insufficient provider/system mitigation	3.2	National
6	Inappropriate siting of social cases in CH	3.2	National
9	CH clinical service scope limited	3.2	National
3	Higher patient/caregiver expectations and insufficient provider/system mitigation measures	3.1	National
12	Discharge planning insufficient to address complex social issues	3.1	Local

Significant variation (>0.5 points) was also found between the clusters, indicating the need for context specific care redesign. Majority of the pain points raised were related to admission and inpatient stay aspects of the care flow journey.

The following 7 common policy barriers emerged:

- CH Clinical Services Scope
- Infrastructure and Equipment Availability
- Manpower Availability and Capabilities
- Funding Model
- Subsidy Gradient
- Medisave and Medishield Life (National Health Insurance Scheme) Policy
- Performance Management.

Seven specific care redesign opportunity areas emerged from the intersection of stakeholder perspectives:

- 1) CH inpatient substitution at home
- 2) Early supported discharge to community through telemedicine, decentralized services, and partnerships
- 3) Direct admission pathways from primary care, community partners, or ED
- 4) Scaling of disease-specific AH-CH pathways to general medicine patients
- 5) CH reviewing, accepting and co-managing specific patient segments within AH
- 6) CH accepting a higher acuity of sub-acute patient
- 7) Shared care with upstream and downstream partners

Results from Workshops 3-4 (Solutioning)

10 care model pilot proposals were generated with the following themes

Direct Admissions

- From Primary Care, Specialist Outpatient Clinics, Hospital-at-home programmes, Nursing Homes, Home Care

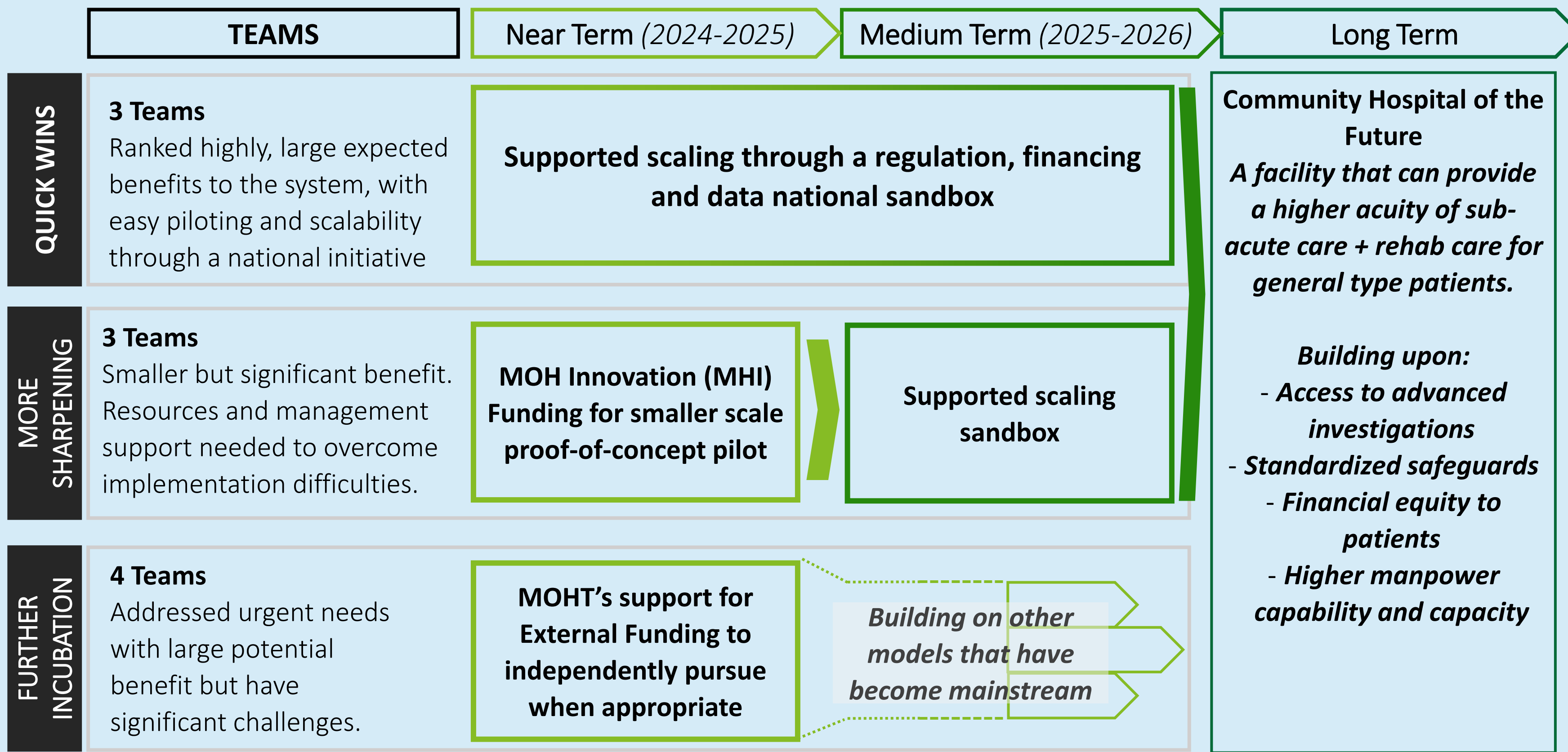
Faster AH-CH Transfer

- Rapid assessment in ED/AH inpatient to be fast-tracked to CH care
- 7-day CH admissions
- End-to-end care pathways with early CH transfer
- Expanded investigations
- Enhanced Care Area

Faster Discharge

- Delivering CH services through tele-rehab and home visits
- Fast admission to outpatient rehab
- Protocolised early supported discharge packages
- Collaborations with downstream partners

Figure 3: The 10 proposals were prioritised for phased implementation



CONCLUSIONS

10 CH care redesign pilot proposals and implementation plans were co-created by healthcare system stakeholders using a design-thinking approach through a four-part workshop series. Design thinking was applied for a systematic approach to develop scalable care model innovations that address end-user identified issues. The pilots have the potential to increase healthcare system efficiency through enhanced direct admission, AH to CH transfer processes and transitions to downstream care. This in turn can resolve the pressing AH bed crunch situation. Implementation efforts through a national sandbox programme, ministry and external grant funding with subsequent onboarding onto the sandbox, are ongoing.

ACKNOWLEDGEMENT

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