



Theme 1. Going beyond Health: Building Partnerships and Strengthening Collaboration for Health in All Policies

Improving Congestive Heart Failure (CHF) Care: A Use-Case for Appropriate and Value-Based Care in Singapore

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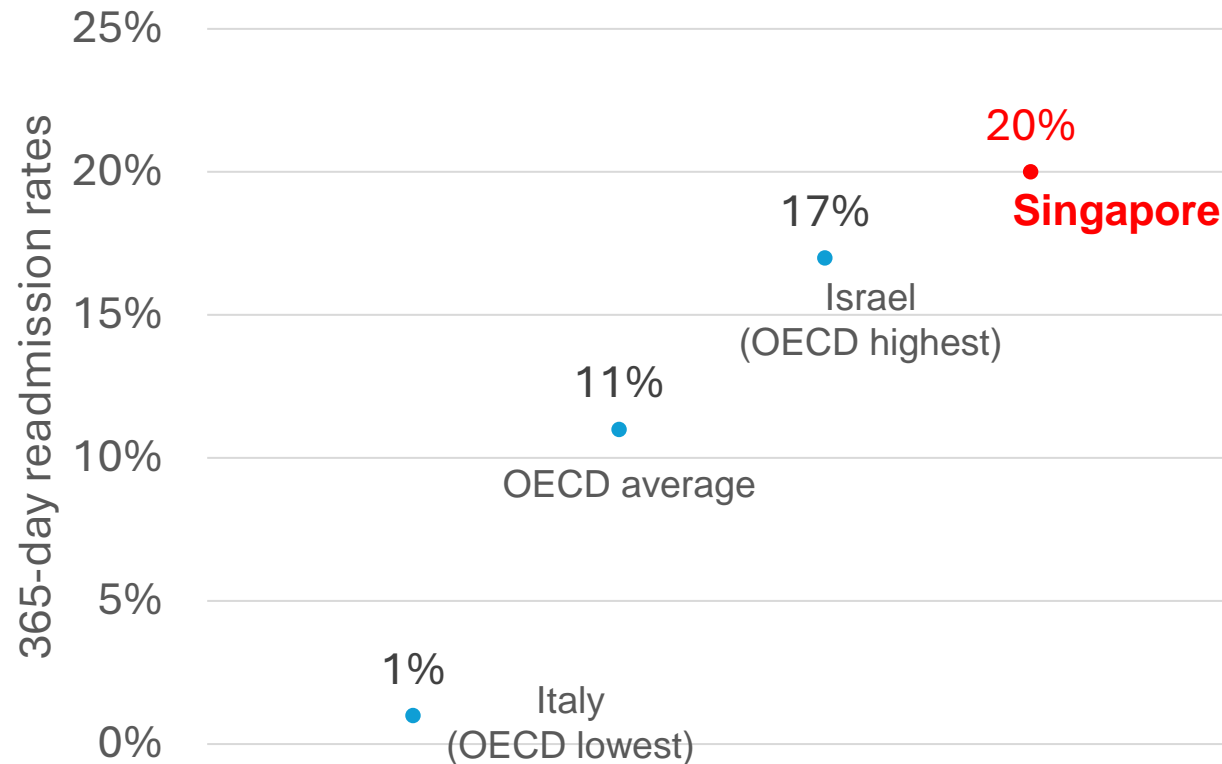
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Singapore's CHF Readmissions Worse than OECD* Peers

**Organisation for Economic Co-operation and Development*

Figure 1. 365-day CHF-related readmission, 2022 (OECD)



- 365-day CHF-related readmission rates are **worst in Singapore** (below-average international performance).
- In 2020, this was 20% in Singapore, compared to 17% in Israel, the worst performing OECD country.

Figure 1: This data is produced using methodology employed by the OECD and age- and sex-adjusted to the 2015 OECD reference population.

CHF Hospitalisation Costs Nearly Doubled in a Decade

- Crude cost attributed to CHF-related hospital admissions rose from SGD **\$36.2 to \$71.7 million** at Compound Annual Growth Rate (CAGR) of 7.9%.
- Hospital admissions account for a **significant bulk of direct healthcare costs** for CHF care in the public sector, with primary care contributing minimally.

Figure 2. Crude cost attributed to CHF care, 2012 to 2022

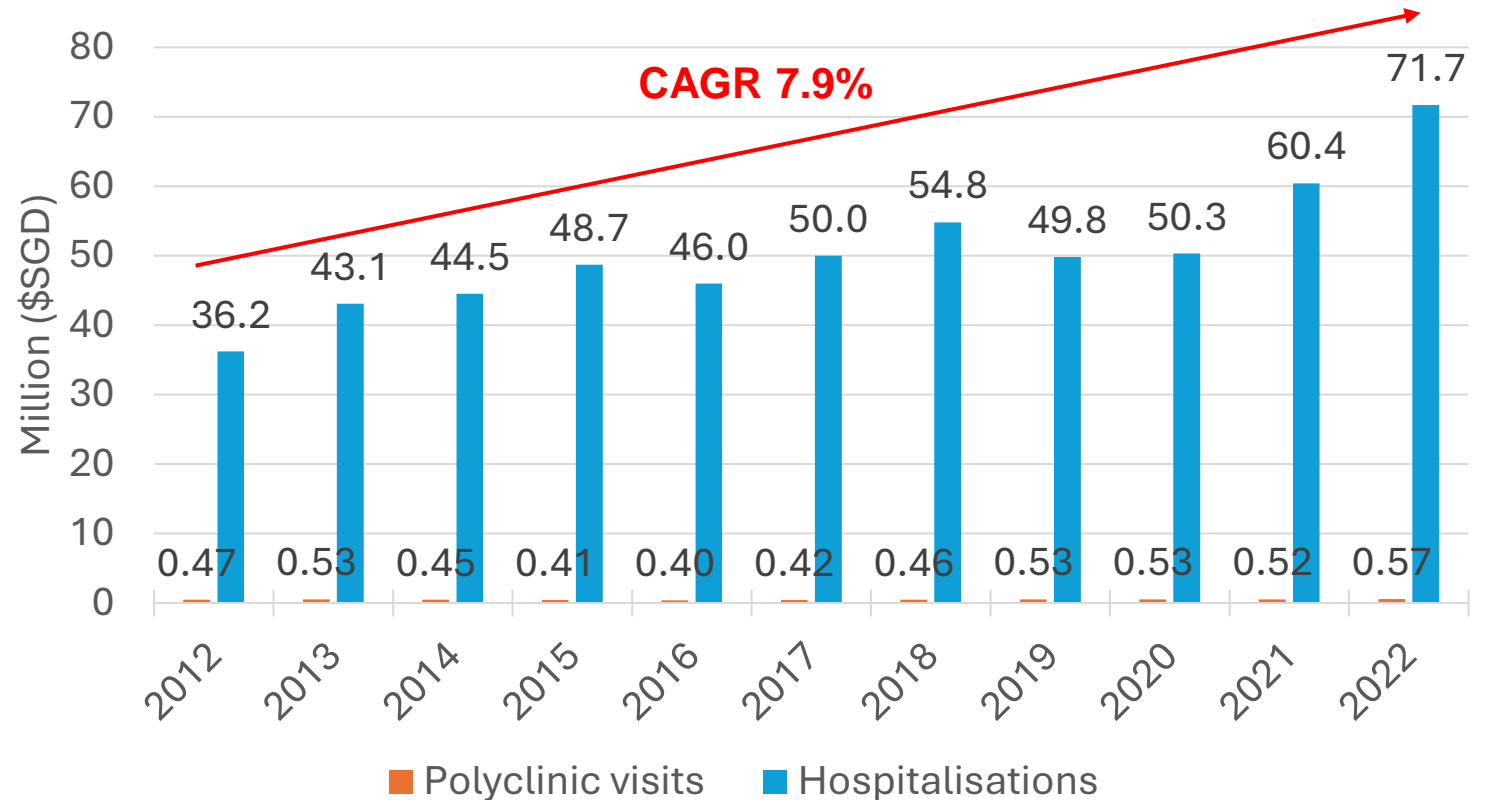


Figure 2: Crude total cost of CHF-related hospitalisations was derived using the national database on total public hospital bill tagged to a primary ICD-10 code of I500, I501, or I509.



Objective

To identify **areas of low-value care** and propose priorities for a **national CHF strategy** aligned with AVBC principles and guideline-directed standards of care.

5 Core Principles of Appropriate and Value-Based Care (AVBC)



Two-Pronged Approach to Analysing CHF Care in Singapore

Qualitative Interviews

To identify systemic & clinical gaps



- 5 cardiologists + 3 primary care doctors
- Explored perspectives on CHF care in primary and tertiary settings
- Analysed using inductive thematic analysis (next slide)

Systematic Searches of CHF Guidelines

To identify practice gaps from standards



**2022
AHA/ACA/HFSA¹**

USA

2021 ESC²

Europe

2024 TSC³

Taiwan

2020 HFSS⁴

Singapore

- 1,023 hits across 5 databases and grey literature
- 4 guidelines chosen + AGREE-II⁵ assessment performed
- Guideline coverage spanned end-to-end patient journey

¹American Heart Association/American College of Cardiology/Heart Failure Society of America

²European Society of Cardiology | ³Taiwan Society of Cardiology | ⁴Heart Failure Society (Singapore)

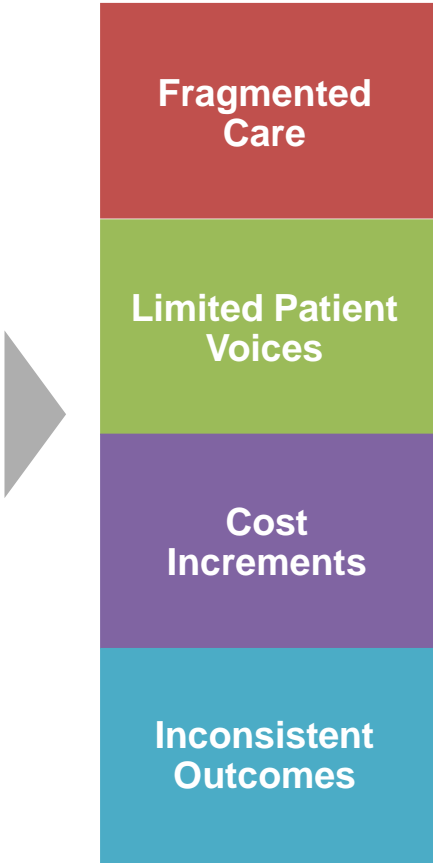
⁵Appraisal of Guidelines for Research and Evaluation II

Thematic Analysis Highlights the Need for Patient-Centredness

Systemic and clinical barriers at various stages of CHF care

<u>Prevention</u> <ul style="list-style-type: none">Limited emphasis on prevention	<u>Diagnosis</u> <ul style="list-style-type: none">Limited guidelines & diagnostics in primary care
<u>Chronic Disease Management</u> <ul style="list-style-type: none">Limited guidance to initiate guideline-directed medical therapy, manage chronic CHF careLack of multidisciplinary team in primary care	<u>Acute Decompensations</u> <ul style="list-style-type: none">Low cardiac rehab uptakeChallenges with Hospital@Home (e.g. capacity)
<u>Care Transition</u> <ul style="list-style-type: none">Poor cardiology-primary care communicationMisaligned financial incentives	<u>End-of-Life</u> <ul style="list-style-type: none">Difficult prognosticationLimited local studies on patient values & preferencesLimited community palliative options
<u>Cross-Cutting Barriers</u> <ul style="list-style-type: none">Lack of outcomes relevant to each stage of CHF careLack of patient-centred outcomes (e.g. functional assessments, quality of life)	

Overarching CHF care gaps

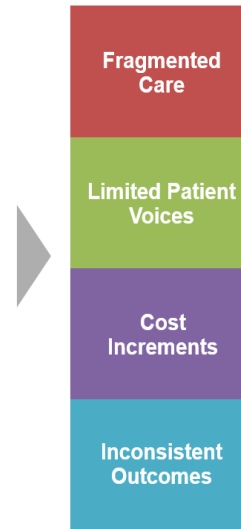


From Care Gaps to 6 Local Priorities for Patient-Centred CHF Care

Systemic & clinical barriers at various stages of CHF care

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Chronic Disease Management <ul style="list-style-type: none"> Limited guidance to initiate guideline-directed medical therapy, manage chronic CHF care Lack of multidisciplinary team in primary care 	Acute Decompensations <ul style="list-style-type: none"> Low cardiac rehab uptake Challenges with Hospital@Home (e.g. capacity)
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Overarching CHF care gaps



Six local priorities



Focus on prevention



Enable primary and community care



Address readmissions



Manage decompensations at home



Develop an end-of-life strategy



Develop person-centred performance framework

Further informed by practice gaps identified from guideline-directed standards

 2022 AHA/ACA/HFSA USA	 2021 ESC Europe	 2024 TSC Taiwan	 2020 HFSS Singapore
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Co-Producing Solutions to Drive a National CHF Strategy



Current Situation & Gaps

What we observed:

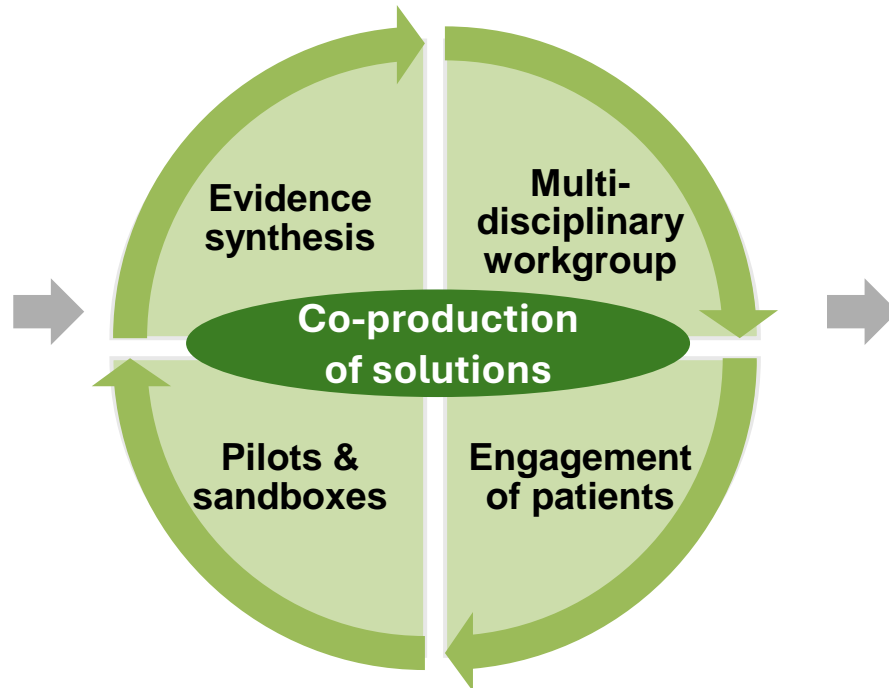
- Below average international performance for CHF-related readmissions
- Rising CHF burden & costs
- Significant variations across hospitals
- Fragmented care
- Limited patient voices

ETPO identified 6 local priorities:

- Focus on prevention
- Enable primary and community care
- Address readmissions
- Manage decompensations at home
- Develop an end-of-life strategy
- Develop person-centred performance framework



Our Activities



4 Key Deliverables



AVBC Recommendations

To guide system-level CHF care and reduce practice variations at clinical, institution and national levels.



ACE Clinical Guideline (ACG) Recommendations

To provide clinical guidance for primary care practitioners to diagnose and manage CHF.



Care Indicators

To establish measurable benchmarks to assess quality, consistency, cost and outcomes of CHF care.



Process, Method Toolkit

To provide practical tools for implementation and enable replicability across institutions.



Thank you!

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