



Cardiac Rehabilitation Service Delivery in New Zealand in 2024: A National Survey

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ŌTĀKOU WHAKAIHU WAKA

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Impact of Cardiovascular Disease

- Cardiovascular disease is the leading cause of death worldwide. (WHO, 2020)
- 4.3% of NZ adults are living with coronary artery disease. (2018/19 Ministry of Health survey)
- Significantly higher prevalence in Māori compared to non-Māori, and in the most deprived compared to least deprived populations. (2018/19 Ministry of Health Survey)
- Māori living rurally are known to have increased mortality due to reduced access to healthcare compared to urban peers. (Crengle, 2022)

Core Components of Cardiac Rehabilitation

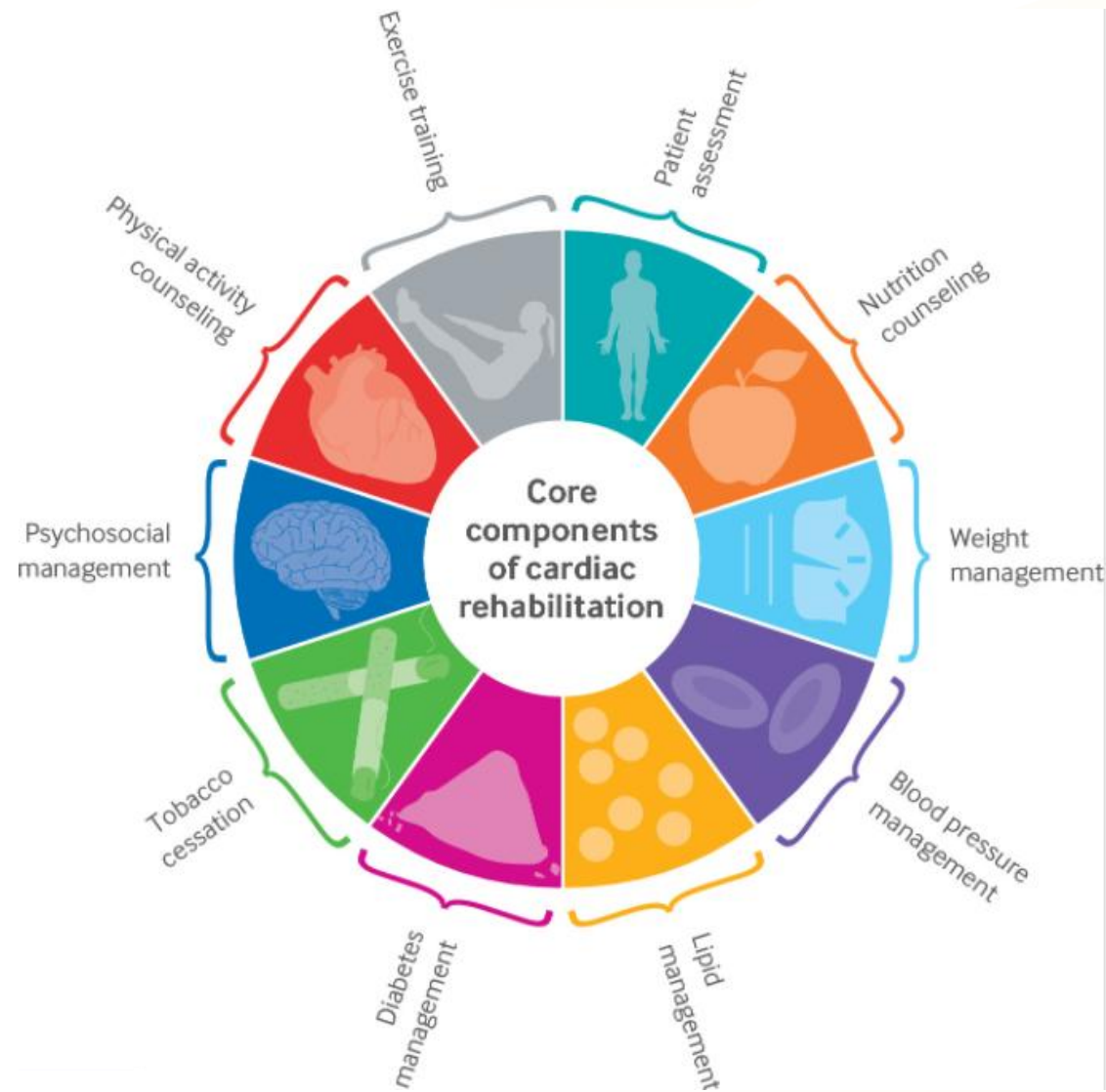


Figure from Richardson et al, BMC, 2019

Benefits of Cardiac Rehabilitation

Reduced risk of future
cardiac events

Reduced risk of all-cause
& cardiac-related mortality

Reduced risk of hospital
readmissions

Improved health-related
quality of life

Barriers to cardiac rehabilitation attendance

- Low referral rates
- Inadequate physician endorsement
- Gender disparity
- Ethnic disparity
- Language barriers
- Psychological factors (depression, anxiety)
- Poor physical health
- Socio-economic factors
- Cost
- Travel distance
- Fragmented care

Home-based cardiac rehabilitation

- Shown to be as effective as centre-based programmes. (Anderson et al, 2017; Thomas et al, 2019; Chindhy et al, 2020)
- Higher uptake (80% vs 62%), adherence (94% vs 68%) and completion (80% vs 47%) compared to centre-based CR. (Varnfield, 2014)
- Previous NZ survey in 2017: 26% of services offered home-based options. (Roxburgh et al, 2019)
- During the COVID-19 pandemic many services had to pivot to home-based. (Besnier et al, 2020)
- Current availability of home-based CR in NZ, and how it is delivered, is unknown.

Aim

To explore how cardiac rehabilitation is currently being delivered in New Zealand

Methods

- Online Qualtrics survey
- Questions informed by the NZ CR guidelines and Australian HF guidelines
- Topic areas:
 - Hospital/centre-based CR delivery
 - Community-based CR delivery
 - Home-based CR delivery
 - Auditing and quality assurance processes
 - Cultural considerations
- Cardiac rehabilitation services identified from Heart Foundation website, CSANZ Cardiac Rehabilitation Working group contacts list and internet search.

Results

- 27 out of 37 cardiac rehabilitation providers responded (73%)
 - 21 responses were from North Island (out of 28 approached)
 - 6 responses were from South Island (out of 9 approached)
- Type of service:
 - Public hospital/Te Whatu Ora (n=16)
 - Private clinic (n=4)
 - Non-government organisation (n=3)
 - Primary health care organisation (n=3)
 - Māori health service provider (n=1)

Ways of Providing Cardiac Rehabilitation

(Total responses n=27)

2024

Hospital/clinic-based 85%

Community-based 56%

Home-based 56%

Ways of Providing Cardiac Rehabilitation

(Total responses n=27)

2024

2017 survey

Hospital/clinic-based

85%

Unable to determine

Community-based

56%

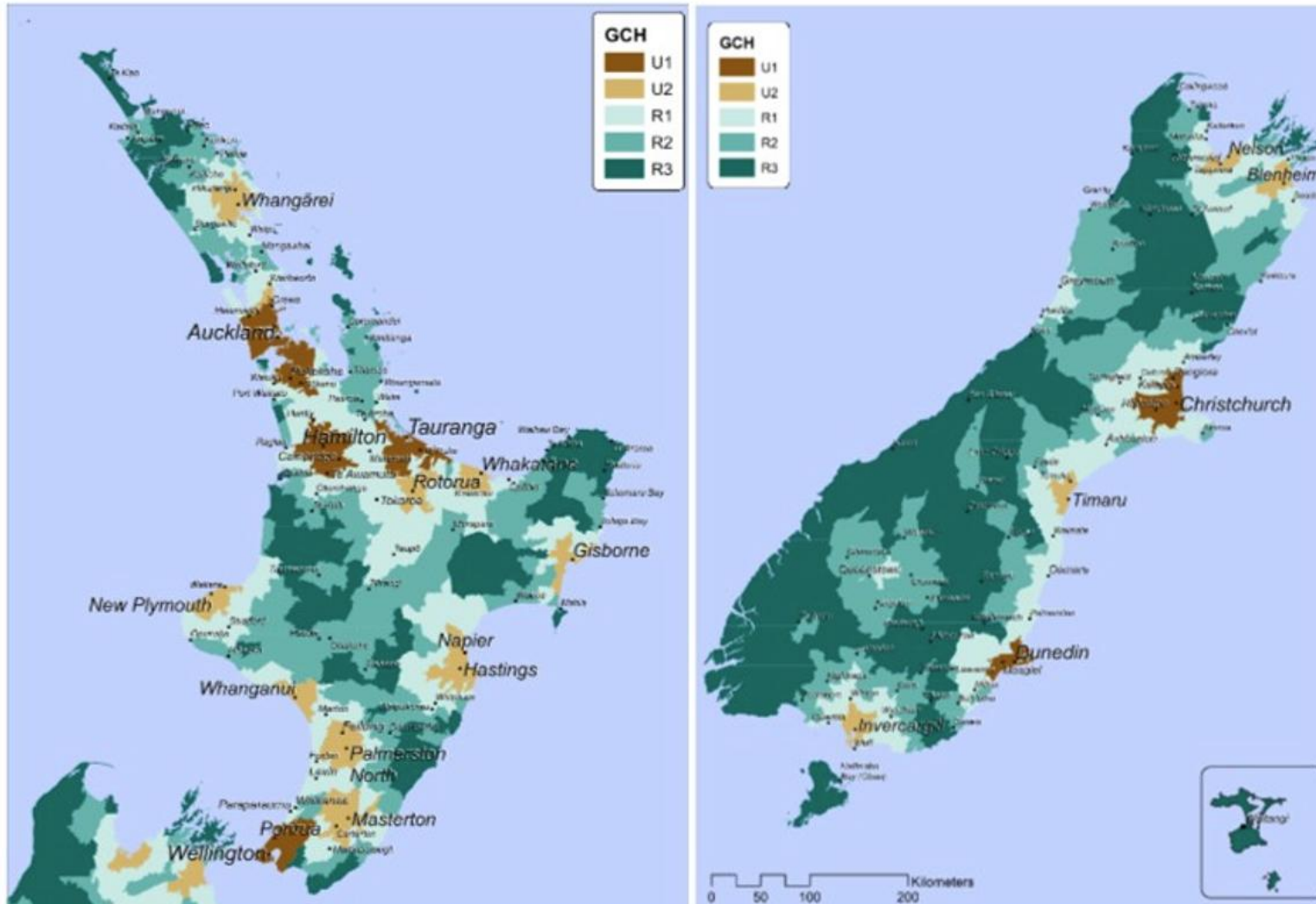
41%

Home-based

56%

26%

Locality of Community-Based Programmes



Urban 1 n=9

Urban 2 n=5

Rural 1 n=3

Rural 2 n=3

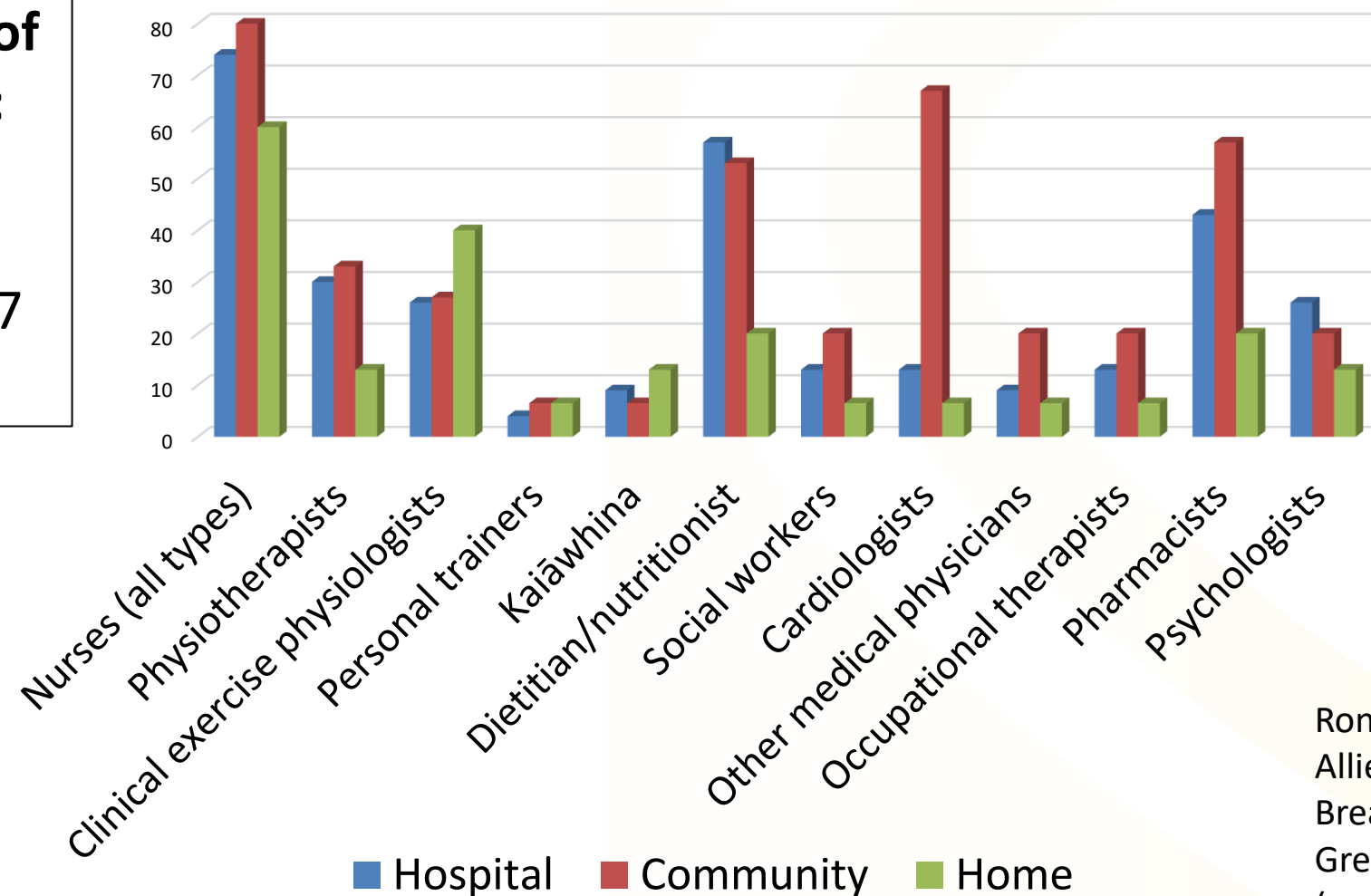
Rural 3 n=3

Images from: Rural Health Research Network
[Maps](#) | [RHRN](#) | [University of Otago](#)

Health Professionals Involved in Delivery of CR

**Mean number of
HPs involved:**

Hospital 3.7
Community 3.7
Home 2.1



Other:

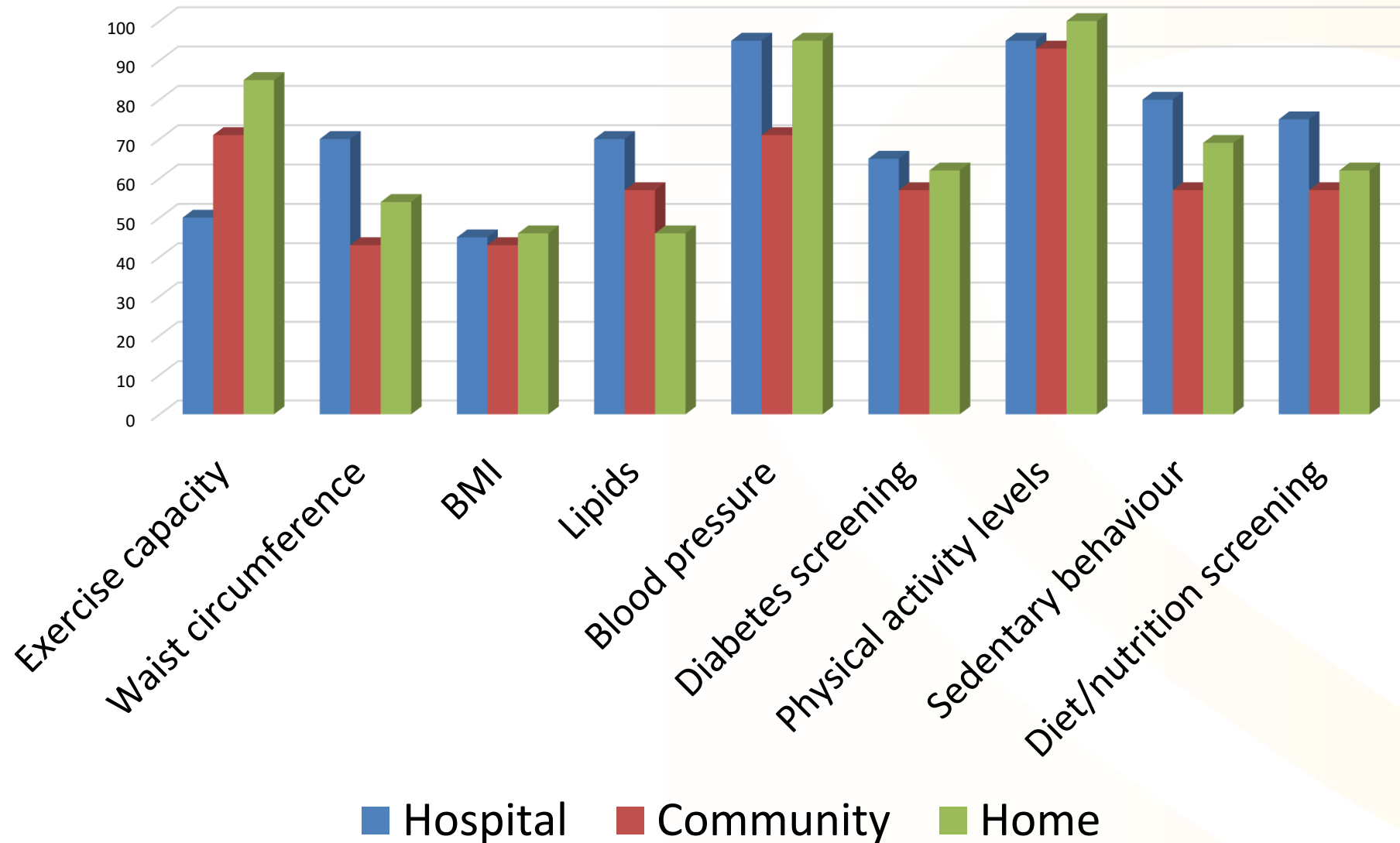
Rongoa practitioners (n=1)
Allied health assistants (n=1)
Breathing specialists (n=1)
Green prescription colleagues (n=1)

Patient Assessment Undertaken Prior to CR

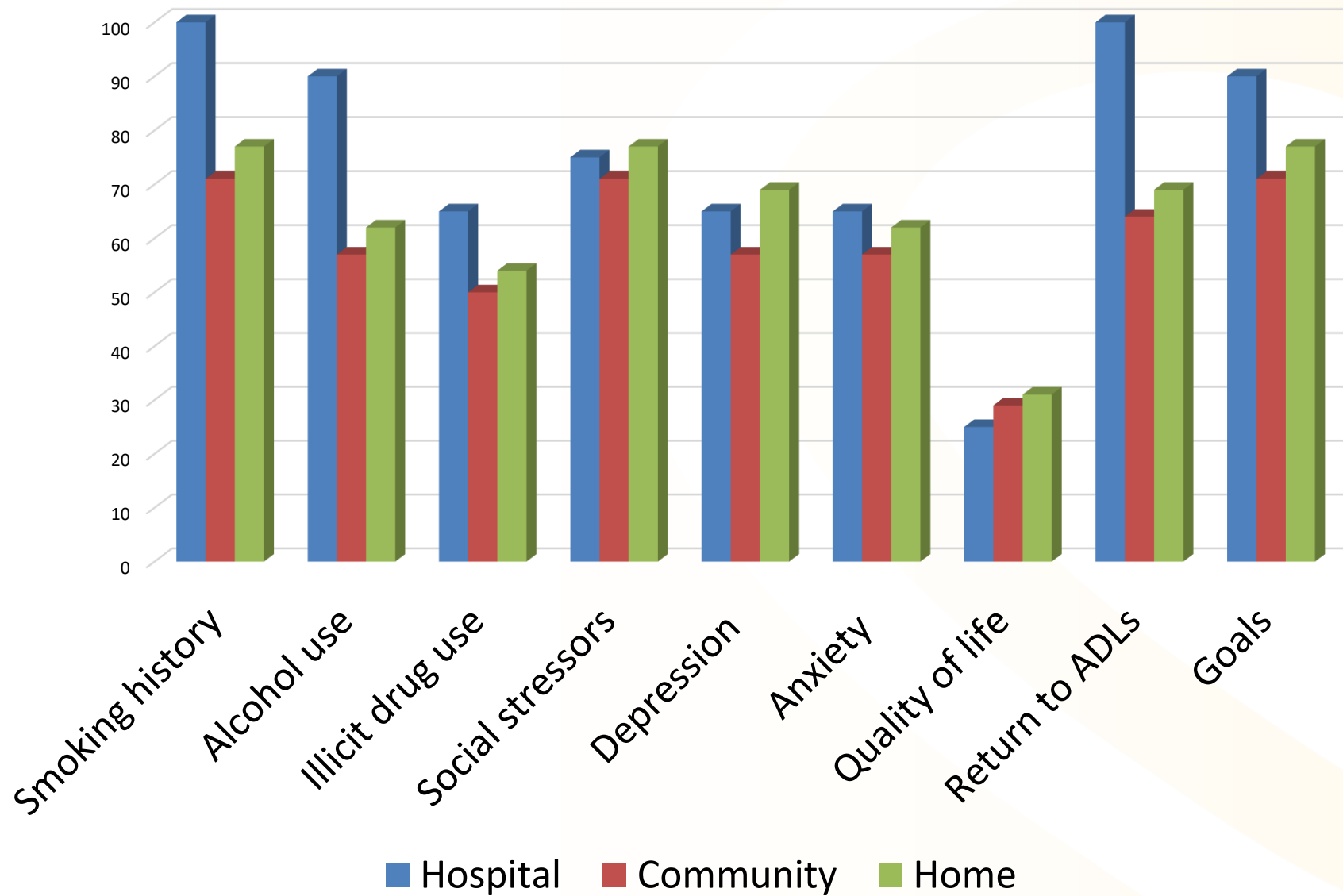
	Yes	No	Depends
Hospital-based	69%	13%	17%
Community-based	66%	7%	27%
Home-based	73%	7.5%	13%

‘Depends’ = depends on condition; Yes for exercise programme
but no if attending education sessions only

Items Assessed



Items Assessed



Inclusion of Education Sessions

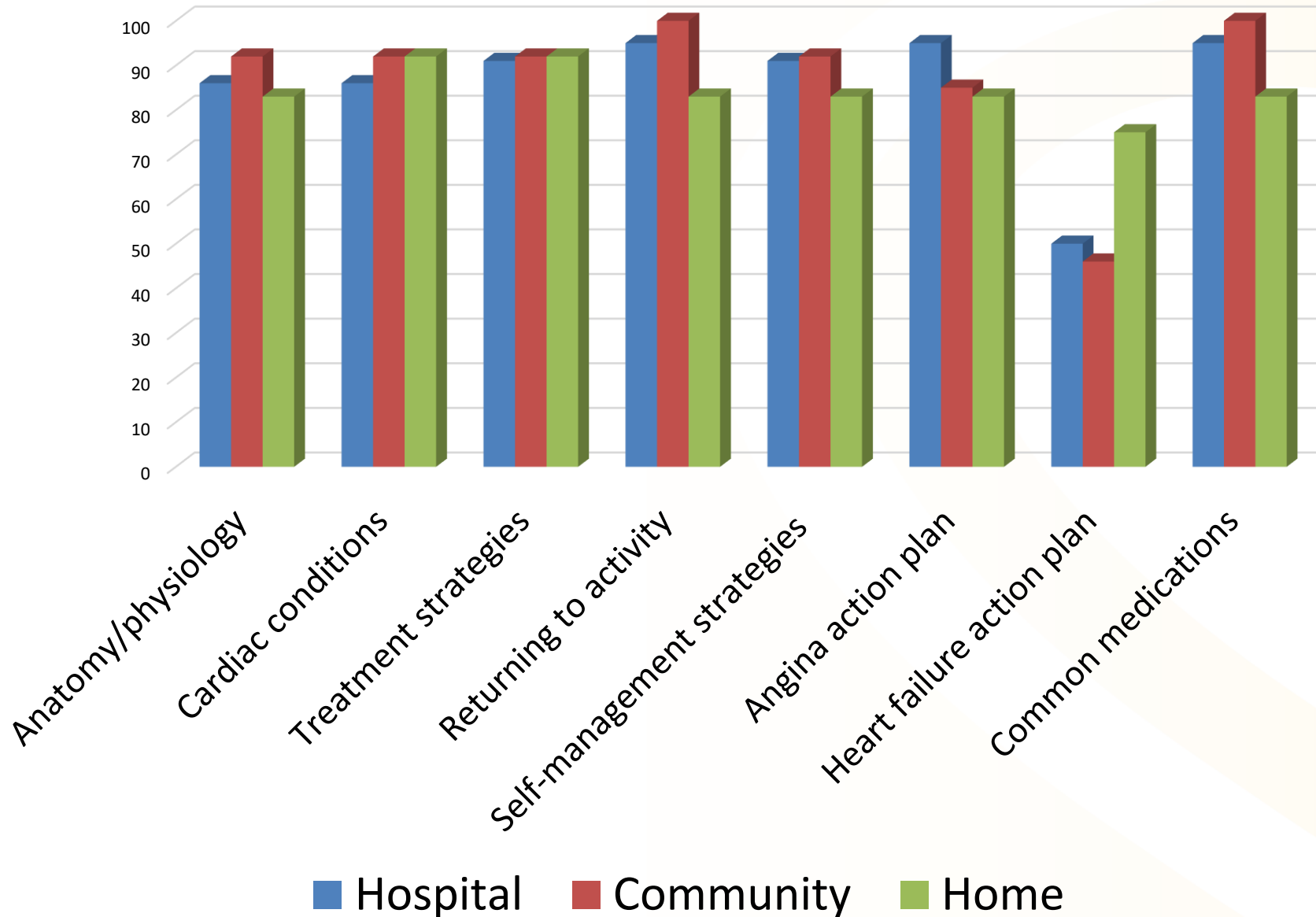
Yes:

Hospital-based 22 out of 27 (96%)

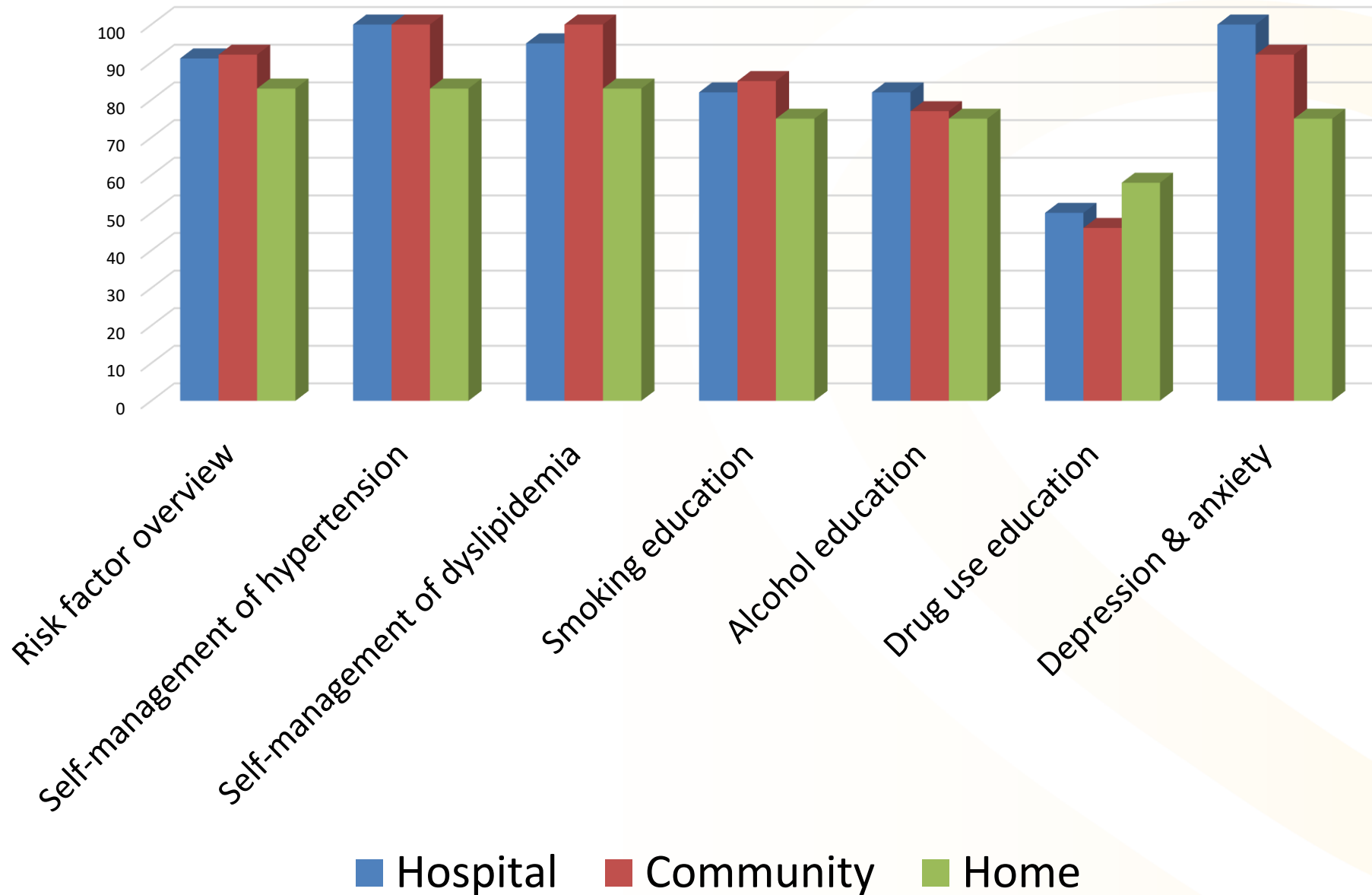
Community-based 13 out of 15 (87%)

Home-based 12 out of 15 (90%)

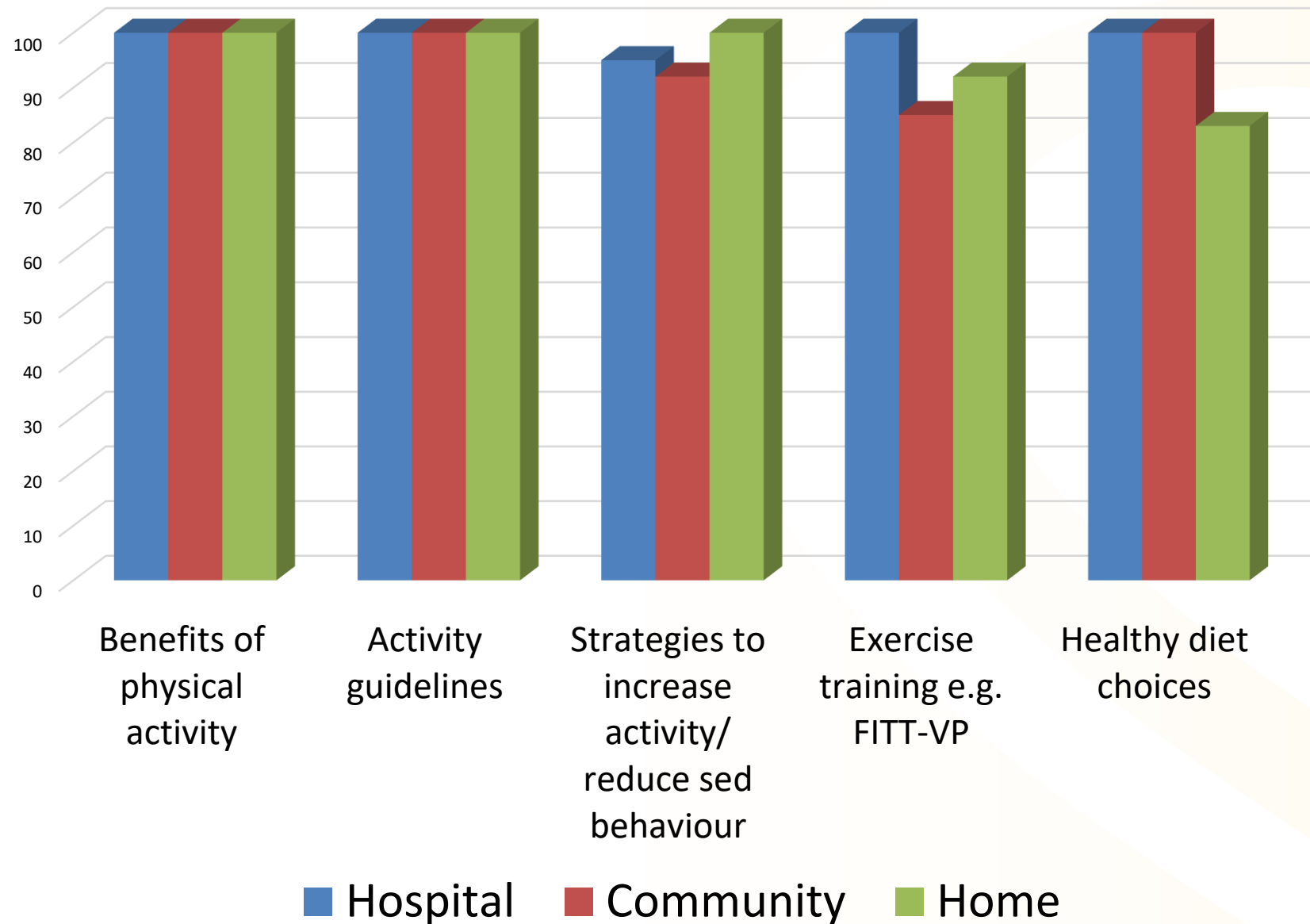
Education Topics



Education Topics



Education Topics



Inclusion of Exercise Training

	Hospital (n=27)	Community (n=15)	Home (n=15)
Supervised exercise sessions	65%	73%	47%
Exercise prescription to do at home	74%	60%	60%

How supervised exercise sessions are provided

Home-based (n=7)

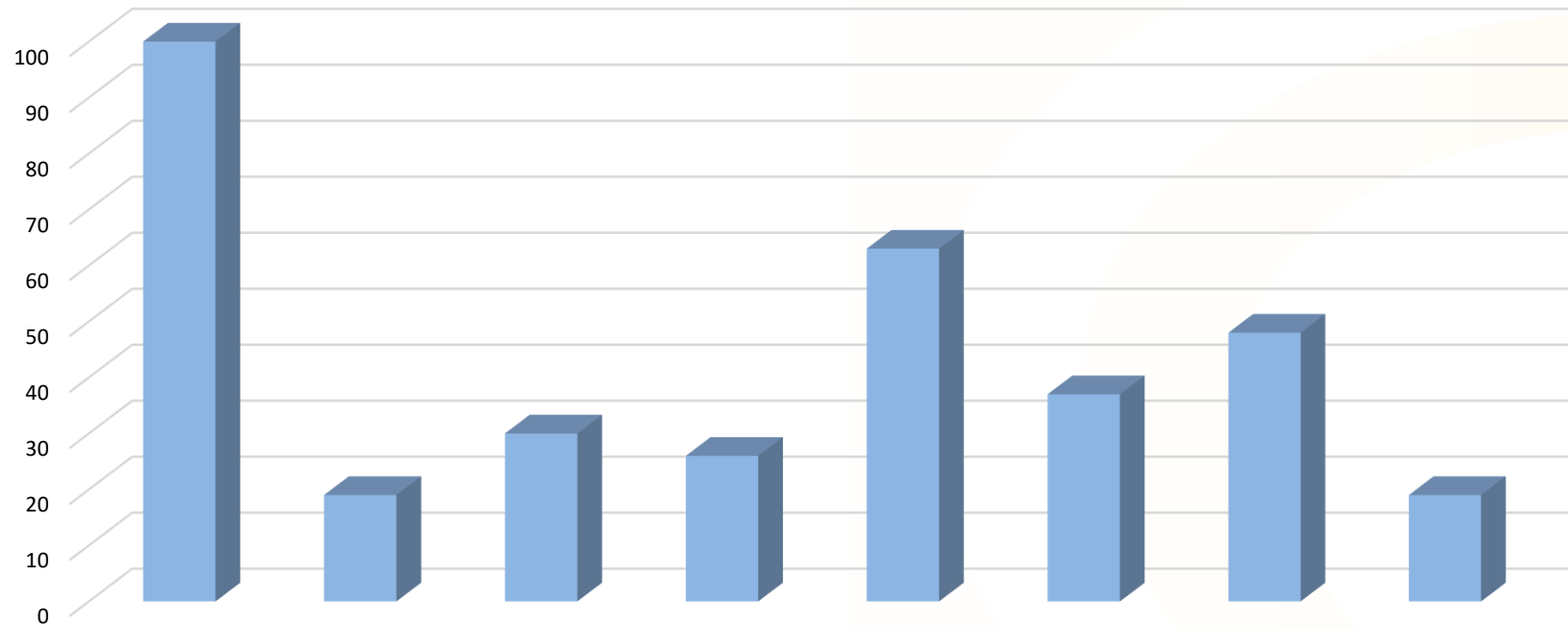
Online via telehealth (e.g. Zoom, Teams)	57%
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In person (at the persons home)	57%
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One-on-one/individual exercise programme	86%
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Group (all doing the same exercise with modifications)	29%
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Cultural Considerations



Other:

- Integrate Te Reo (written and spoken (n=3)
- Utilise Te Whare Tapa Wha (n=3)
- Whakawhānaungatanga (n=2)
- Karakia (n=2)
- Kaupapa Māori underpinning all aspects of the programme (n=1)

Conclusions

- Availability of community and home-based CR in NZ appears to have increased (but still only provided by around half of CR providers).
 - Home-based services appear similar in regard to patient assessment and education topics ...however, there appear to be less home-based exercise options available.
 - There is limited availability of community-based CR in rural zoned areas.
- Reduced availability of comprehensive, exercise-based CR for rural patients?
- There is variability in meeting cultural recommendations from the NZ CR guidelines.

Acknowledgements

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