Inequality or Inequity?

Referral Patterns to Hospital in the Home for patients in inner metropolitan Sydney

Jude Page, Health Equity Research & Development Unit,
Sydney Local Health District

Background

Hospital in the home (HITH) schemes are a popular alternative to standard hospital care. They provide acute and post-acute care in a patient's residence for specified conditions that would normally require admission to hospital [1].

HITH has increased in popularity because of concerns about safety, availability, advances in medical and surgical treatments and cost of inpatient care [2]. A meta-analysis of HITH found evidence of:

- Improved health outcomes: including reductions in mortality, reduced readmissions and reduced complications
- Decreased lengths of hospital stay
- Reduced costs
- Patient and carer satisfaction: significantly higher for most conditions but no change in carer burden [3].

Better outcomes might be more related to supported recovery at home than particular diseases, or the amount of hospital care that is replaced by HITH care [4]. However, hospital based clinicians have expressed concern that HITH care is lower quality than inhospital care and reduces access to technologies and resources that deliver urgent, life-saving treatment [2]. Changes in health policy and pressure to reduce time spent in hospital have significant impact on the practices of staff, but home based care also results in a significant shift in responsibility, knowledge, and cost to patients and/or significant others.

The Sydney Local Health District (SLHD) model involves medical oversight by a senior Doctor with assessment and care from a HITH Clinic and/or home visits by Sydney District Nursing.

Aim

To identify issues of equity of participation in HITH

Hypothesis:
- People of non-English speaking backgrounds and women are less likely to be referred to HITH
- There are significant differences in uptake HITH by diagnostic groups and Hospitals

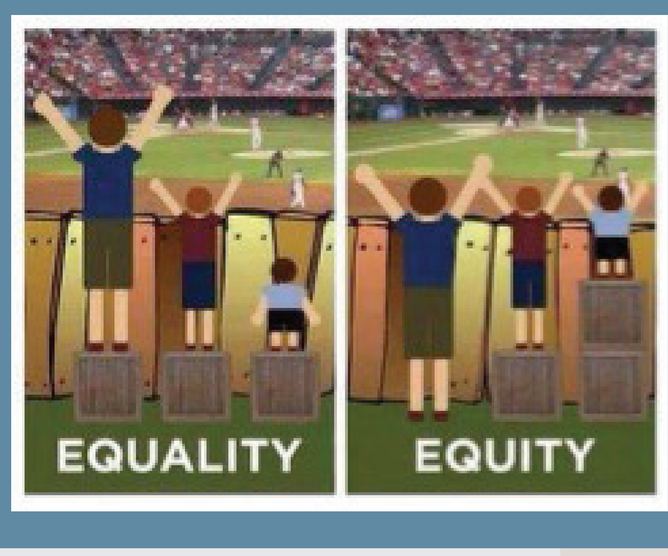
Methods

- HITH has operated in SLHD for over 8 years. Since December 2013 HITH expanded to four Hospitals with increased patient numbers, from 400 patients in 2013 to 1500 in 2015
- 4100 adults were identified as attending SLHD hospitals with six specified conditions (DRGs), 1037 (25%) were referred to HITH
- Patient demographic characteristics were analysed

Health Inequity within Sydney LHD

Local, national and international evidence would suggest that within the population of the Sydney LHD there are considerable inequalities in health: (that is differences that are systematic, avoidable and believed to be unfair). These inequities relate to:

- Some social groups (Indigenous people, refugees)
- Populations of some suburbs/local government areas have:
  - higher rates of premature mortality
  - risks of preventable disease and injury and
  - less access to optimal health care

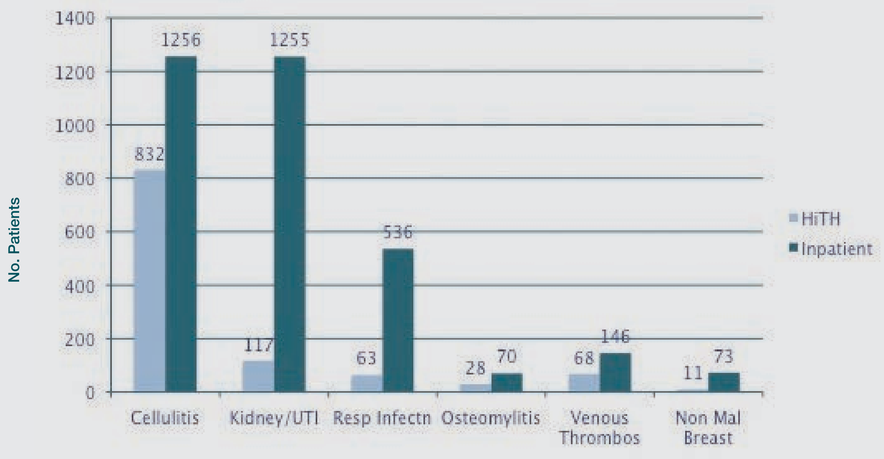


Equality = SAME
This is only fair when everyone has a fair start

Equity = FAIRNESS
This is only fair when everyone has same opportunities

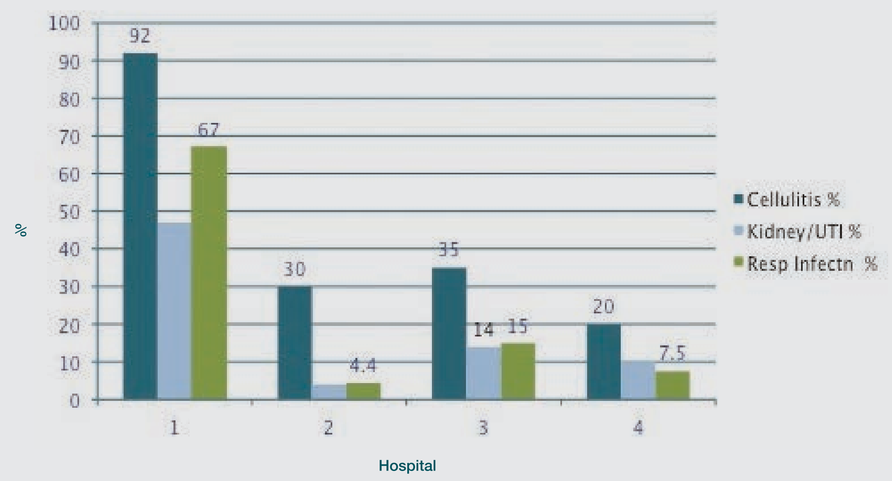
Findings

HITH vs Inpatient care for specific DRG categories, all facilities Sydney LHD (2013-2015)



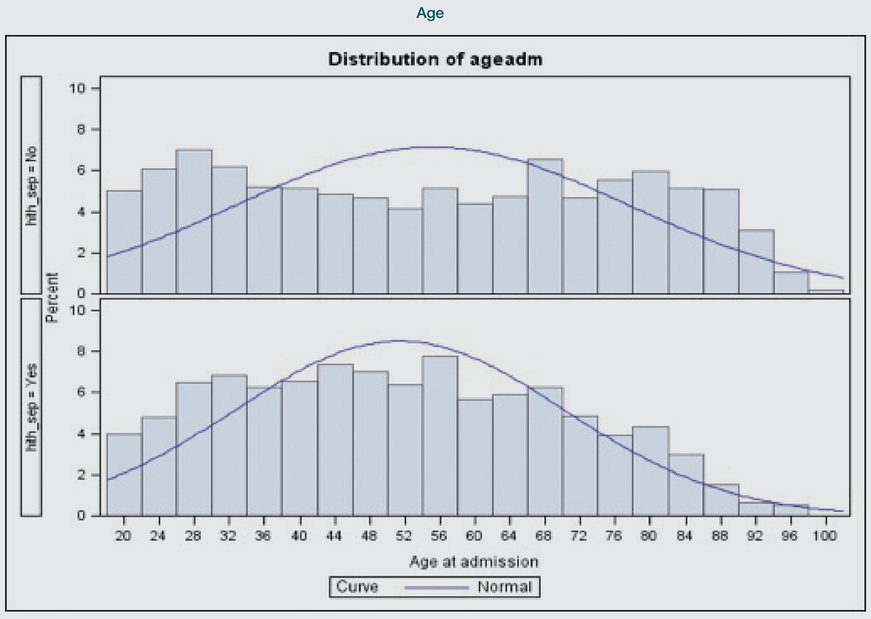
Some conditions such as cellulitis are more suited to home based care, depending on patient acuity (including comorbid conditions), adequate home based support and confidence to self manage care and hospital practice and culture.

Differences in admission to HITH by condition (DRG) and facility

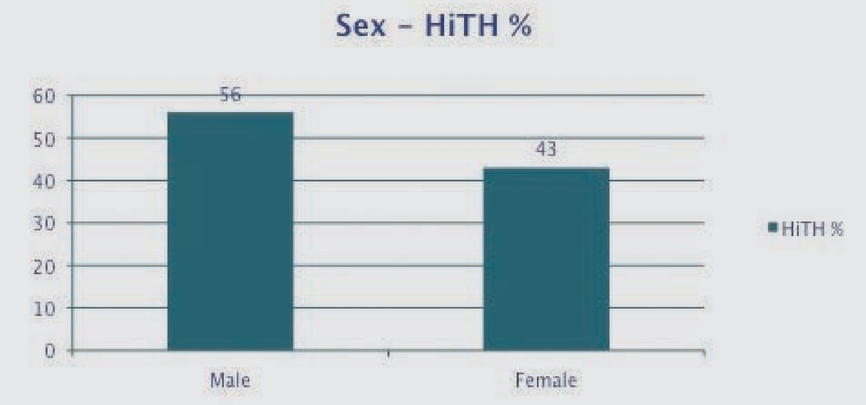


Differences in admission to HITH may be due to maturity of the program within the hospital, the established program was significantly more likely to admit patients to the program (P<0.001). Patient acuity, Hospital size and communication barriers may also influence admission rates.

Age



HITH patients were younger 51 years vs 55 years (Median) for inpatients (P<0.001)
Range 18-98 years
Confounder: People residing in Aged care facilities are not eligible for HITH



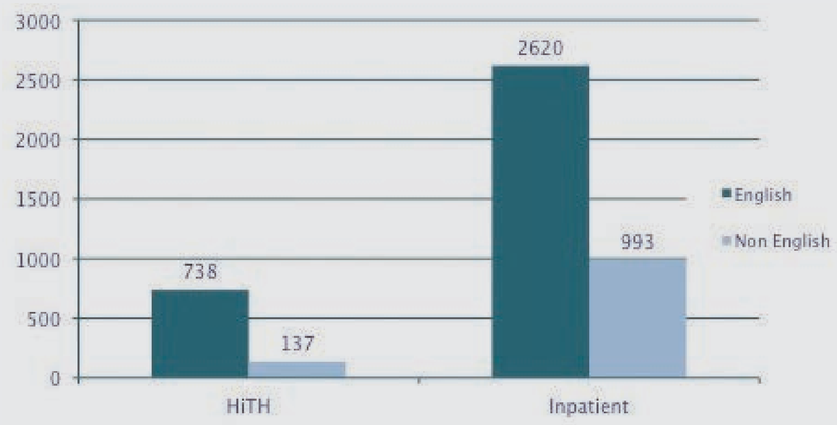
More females in cohort (53% vs 47%) but females were less likely to be admitted to HITH 44*% vs 56%, (P<0.001). This may be due to acuity of illness, referral bias and/or availability of adequate care at home.

Referral by Country of Birth and Language

Cohort	HITH	Inpatient
Born Overseas 1,821 (42%)	426 (23%)	1,405 (77%)
Speak language other than English at home 1,038 (25%)	137*(12%)	993 (88%)
English preferred language 3,275 (80%)	914* (22%)	2,361 (78%)

* P<0.001

Referral to HITH - Speak Language other than English at Home



People who speak a language other than English at home were less likely to be admitted to HITH (P<0.001). This may be due to communication or cultural barriers, not being aware of the program and clinician communication and time constraints.

Socio-Economic Disadvantage

Socio-Economic Indexes for Areas (SEIFA, ABS 2011) ranks areas according to relative socio-economic advantage and disadvantage.

SEIFA Index	HITH	Inpatient
1-5 disadvantaged	65* (20%)	261 (80%)
6-10 average-advantaged	593* (28%)	1536 (72%)

Of the 2,455 people in the cohort who resided within the SLHD boundaries approximately 15% lived in relatively disadvantaged suburbs (SEIFA Index <=5) and were significantly less likely to participate in HITH (P<0.001). This may be due to less carer support at home to manage care, health literacy barriers, acuity of illness and/referral bias.

Limitations

- Patient acuity cannot be determined from administrative data
- People in residential aged care facilities are not eligible for HITH
- 40% of the cohort resided outside the Health District boundaries

Discussion

Are differences in patterns of referral to HITH among different hospitals and patient groups an inequality or an inequity?

These differences only matter if outcomes from participation in HITH are better for the patient and carers. Further analysis of patient outcomes is required to answer this question.

Are differing patterns of referral due to disadvantaged people being more unsuitable for the program?

This appears unlikely as the hospital with the most disadvantaged catchment had the highest rate of participation among disadvantaged people and people who didn't speak English at home. This finding may be due to a diverse workforce who speaks languages other than English, familiarity working with these populations and a smaller hospital resulting higher awareness and easier referral to the program from various sources.

Does the system contribute to inequitable participation in the program for some groups? Are there individual factors involved or a combination of both?

Access to health care is determined in part by the location, affordability and appropriateness of health care services. It is also determined by patients' ability to perceive the need for care, to know about the health care services available to them, have the means to access the service and the ability to engage and participate in treatment decisions [4].

New programs take time to adjust and for clinicians to have confidence and trust that patients will have good or better health care out of hospital. The transfer of care and responsibility to the patient and carer means the hospital system need to provide information and support to manage care at home in a way that is understandable and accessible to patients and carers to self-manage their care.

Conclusion

Analysis of patient characteristics and outcome data through an equity lens is an effective way to identify who is participating in health services and treatment and who is not receiving the same level of services they may require. To move towards effective health service provision for all where patient need and outcomes are paramount over service activity, greater understanding of strategies to reduce communication and access barriers are required. Further research will inform ways to strengthen the partnership between patients, their carers and health services to support self-management and reduce inequities in the access to and utilisation of optimal health care.

Authors
A/Prof Elizabeth Harris[1,2] Mandy Burgess, Project Manager Hospital in the Home[3], Prof Elizabeth Comino[2], Dr John Cullen Clinical Director - Aged Care / Rehabilitation / General Medicine / Chronic and Ambulatory Care / General Practice SLHD[3],Claudia Pollauszach Sydney District Nursing[3], Jude Page, Service Development Manager[1].

1. Health Equity Research and Development Unit, Sydney Local Health District
2. Centre for Primary Health Care and Equity, University NSW
3. Sydney Local Health District

References
1. Caplan GA. Does 'Hospital in the Home' treatment prevent delirium? *Aging Health* 2008; 4: 69-74.
2. Larkins RG, Martin TJ, Johnston CI. The boundaryless hospital – a commentary [editorial]. *Aust N Z J Med* 1995; 25: 169-170
3. Caplan GA, Sulaiman NS, Mangin DA, Ricaudab NA, Wilson AD and Barclay L. A meta-analysis of "hospital in the home" *Med J Aust* 2012; 197 (9): 512-519.
4. Levesque J-F, Harris M, Russell G. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. I*nternational Journal for Equity in Health*. 2013;12(1):18
5. Australian Bureau of Statics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011.