Integrated Stroke Unit: human centered design

The relationship between environment, patient experience and outcomes is increasingly becoming recognised. Up to 40% of stroke patients hospitalised for more than 4 weeks can suffer depression and the hospital environment may play contributory role to this (Turner 2012). An Integrated Stroke Unit (ISU) aims to improve patient outcomes by providing a dedicated unit for acute care and rehabilitation.

At WDHB “user groups” traditionally have been involved in targeted areas of facility design; this often excludes current patients. This study sought to understand patient and whānau experiences of the current stroke ward environment in order to contribute to the future design of an ISU.

Methods
Semi-structured interviews were conducted with 20 patients and/or whānau admitted with a stroke at North Shore Hospital. Informed consent was gained prior to interviews. Interviews were audio recorded and transcribed verbatim. Thematic analysis was conducted using nVIVO software using an inductive approach. The themes were then evaluated against other literature to confirm face validity.

Results
20 patients and whānau were interviewed over a two month period. This included 10 females and 10 males. Age ranged from 48 -91 years, average 76. 16 participants were of European descent, 2 Asian, 1 Maori and 1 Middle Eastern.

Welcoming and comforting environment
Patients revealed they required an inviting space which was visually appealing but also easy to navigate. Warm colours that were easy on the eye were mentioned, particularly in the bedrooms. The space needs to allow for rest and relaxation, including space for family to visit or stay overnight.

It’s dreary, it’s not inviting – it could do with a visual vamping … I got lost, I got lost three or four times. (Male + Whānau 50 Euro)

I think visually, white walls, “oh my god, I’m in prison” (Whānau of male 74 Asian)

We’re lucky because he has a family members stay with him 24 hours, so if he needed help. We have a mind we rely on ourselves rather than the nurse. (Whānau of Male 75 Asian)

Recovery and adaptation
Patients described physical and emotional impacts following a stroke; a sense of disbelief, shock, the loss of function and confidence. Patients reacted differently to their diagnosis and one patient mentioned their transition in needs.

They put me in a single room…that was at the appropriate time… I think I still needed some me time… It got me ready for here to join these lovely ladies. (Female 67 Euro)

I’d rather be in a single room, with no one around, I’d find that easier…I’ve got the curtain pulled… I find I recoup better. (Male 48 Euro)

Accessibility and convenience
Patients expressed needing accessible spaces and equipment, and the ability to have personal access and control over their belongings and surroundings.

I can’t open the drawers, I can’t open my cupboard. You’ve got to bend over… I can’t reach it from here. (Female 91 Euro)

He can’t see from his left eye, he bumped into the bed and the wheelchair because there was a narrow walkway to the toilet. (Whānau of male 73 Middle Eastern)

Stimulation and Entertainment
Patients expressed boredom and loneliness. Some requested a library, music, the radio or a television, and art work.

I’ve been here four days staring at the same old boring wall…I’d bring in 5 and 6 year olds and give them paintbrushes. At least you can look at it and have a laugh. (Male 50 Euro)

Connection to people, world and whenua
Patients described a sense of displacement while in hospital and needing to feel connected – whether reading the news, socializing or connection to whānau (the land).

There’s a window, and ample for seeing out of, and be part of something else, you know, just not isolated. I feel secure. (Male 89 Euro)

There are ward people which you can either connect with…I think people who are not well, who have suffered some sort of loss, or ability…tend to meld with other people quite well (Female 74 Euro)

Discussion
Patients and whānau provided input into the priorities for an ISU. Five key themes emerged from these interviews. These themes contribute to understanding patient experience and can be used as deliverables to which design can be compared against. For example, future design could include user friendly furnishings, flexible spaces for relaxation and socialisation, and accessible green areas. Furthermore, the process itself is a step towards placing the patient at the centre of design at WDHB. It is recommended that a human-centered design approach should be developed in future facility developments at WDHB.