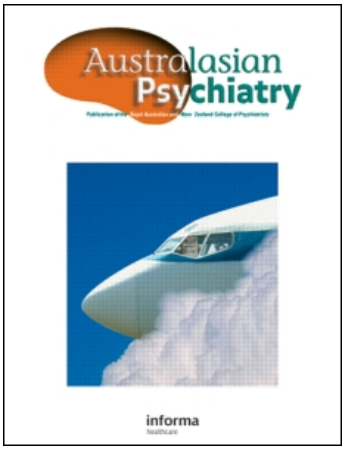

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Bridging the triple divide: performance and innovative multimedia in the service of behavioural health change in remote Indigenous settings

Ernest Hunter [a]; Helen Travers [b]; Julie Gibson [c]; Jonathan Campion [d]
[a] Health Interactive Technology Network, The Centre for Rural and Remote Mental Health - Queensland, Cairns, QLD, Australia [b] Health Interactive Technology Network, University of Queensland, Cairns, QLD, Australia [c] Health Interactive Technology Network, Perth, WA, Australia [d] The Centre for Rural and Remote Mental Health - Queensland, Cairns, QLD, Australia

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Bridging the triple divide: performance and innovative multimedia in the service of behavioural health change in remote Indigenous settings

Ernest Hunter, Helen Travers, Julie Gibson and Jonathan Campion

Objective: *The use of innovative information technology is now well established in health. However, while the gap in health status between Indigenous and other Australians is both significant and unchanging, there is limited application of these new approaches to addressing this national health priority. This may in part reflect the 'digital divide', which is another facet of Indigenous disadvantage. This paper describes an approach to address both issues in remote Indigenous settings.*

Results: *The Health Interactive Technology Network began as a proof-of-concept study of touchscreen technology in two Indigenous health settings. It has subsequently expanded to a number of remote Indigenous communities and developed new platforms and applications to respond to emerging health issues. In creating narrative, interactive approaches to address choices in relation to health behaviours, the community development and engagement effects of the creative process have been highlighted. These findings suggest that these approaches will be suited to further expansion in the area of mental health.*

Key words: *behavioural health, Indigenous, interactive technology, performance, touchscreen.*

Overall death rates are 2.9 and 2.6 times higher for Indigenous males and females, respectively, compared to non-Indigenous Australians with the age-specific rates being more than five times higher for those aged 35–44 years – usually the most productive years of life.[1] Indigenous Australians experience much higher levels of health risks and have hospitalization rates for psychotic and substance use disorders between two and four times higher than for the wider population.[2] The divide that exists in terms of health status and outcomes between Aboriginal and Torres Strait Islanders and non-Indigenous Australians has now been framed as an issue of rights and social justice.[3] That this reflects the burden of adverse social determinants is also clear, prominent among which are abysmal educational outcomes[4–6] related to lower education retention rates that have been shown to be associated with lack of access to electronic resources.[7] Indeed, this constitutes a second divide between these populations – the 'digital divide'.[8] The result is a third 'divide', what Kickbusch refers to as the 'education divide',[9] noting that the ''positive and multiplier effects of education and general literacy on population health, particularly women's health, are well known and researched'', and that ''health literacy as a discrete form of literacy is becoming increasingly important for social, economic and health development'' (p. 289). However, Kickbusch reminds

Ernest Hunter
Regional Psychiatrist, Health Interactive Technology Network, The Centre for Rural and Remote Mental Health – Queensland, Cairns, QLD, Australia.

Helen Travers
Program Director, Health Interactive Technology Network, University of Queensland, Cairns, QLD, Australia.

Julie Gibson
Technical Manager, Health Interactive Technology Network, Perth, WA, Australia.

Jonathan Campion
Psychiatric Registrar, The Centre for Rural and Remote Mental Health – Queensland, Cairns, QLD, Australia.

Correspondence: Dr Ernest Hunter, The Centre for Rural and Remote Mental Health – Queensland, PO Box 1103, Cairns, QLD 4870, Australia.
Email: ernest_hunter@health.qld.gov.au

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us that most populations, particularly those in the developing world, learn through listening and watching rather than through literacy-dependent media. Indigenous Australians, particularly those living in discrete Indigenous communities, which Peggy Brock[10] and Noel Pearson[11] have referred to as 'outback ghettos' confront a 'triple divide', compromised in terms of health and education status and electronic engagement with a globalized world.

Increasingly, bridging the digital divide is understood as a critical opportunity to contribute to bridging the health divide. In this paper a program in north Queensland is described, which for 6 years has been building capacity in this area by creating audio-visual, touchscreen-based modules requiring minimal formal literacy to address a range of health issues stemming from lifestyles associated with disadvantage.[12,13] Through this process the importance of encouraging and harnessing Indigenous agency by engaging end users in the development and production of material (rather than as passive recipients) has been emphasized. This also utilizes the effectiveness of theatre as a means to health promotion that is particularly relevant in populations with compromised literacy and to address stigmatized conditions.[14,15] As noted by Mbizvo:[14]

> Theatre has proven to be an effective and entertaining strategy for dissemination of health information and reinforcement of positive health messages. Theatre can overcome literacy barriers through use of local experience and vernacular to provoke emotional and analytical responses in the audience. (p. S30)

This paper presents preliminary findings drawn from the evaluation of one segment of the project[16] utilizing local performance to produce an innovative multimedia resource to address a key Indigenous, behavioural health priority – sexual health. Personal and community benefits from such engagement are identified and the implications for this approach in mental health considered.

BACKGROUND

The National Health Interactive Technology Network (HITnet) Development Program has evolved through three overlapping phases of a long-term multimedia health promotion strategy. Phase one of the strategy, 2001–02, was a pilot project in two Aboriginal communities, which identified that Aboriginal people will use touchscreen technology (with audio feedback) to access culturally appropriate health information (the original topics being diabetes and joint problems presented in an interactive but didactic style). The pilot provided strong circumstantial evidence that the use of touchscreen technology in local communities changes attitudes and intentions toward health and behaviour and that further development and evaluation of the project was warranted.[12,13]

The second phase, 2003–06, sought to measure health and technology-related outcomes from kiosk use in four Cape York communities. The aim was to formally measure change in knowledge, attitudes, behaviour and local capacity, while ensuring gradual transition in ownership to the local level, and involved production of new modules on diabetes, alcohol use (with an interactive version of the Alcohol Use Disorders Identification Test (AUDIT)) and child health (including a submenu section on 'feelings'). In response to the challenge of developing engaging material on consequential harm, a narrative approach was utilized to develop a further module on alcohol use which allows the user to explore choice-contingent consequences within the narrative. Through this experience, the project team was alerted to the powerful local 'enhancement' effects of production, which led to using the same approach but with more sophisticated interactive video to produce a module on sexual health – *'Put it on'* – which was filmed in one of the remote communities.

For each of these, the project team worked extensively with local Elders, schools, health workers, and religious leaders to develop culturally appropriate content. Community members were involved in the project as paid actors in the short films, production assistants, script writers, and post-production assistants. As this phase developed, the project evaluation showed that the high level of community engagement and investment in the content creation and production process led to widespread use of and interest in the resulting health content across all ages in the community. Young people involved in the project were particularly interested in continuing to learn about film making and other multimedia skills.[16]

The third and current phase oversees the national expansion of an interactive multimedia health network featuring touchscreen kiosks, to improve access for information-disadvantaged Indigenous populations. The project has grown to involve not only touchscreen kiosks (increasing incrementally), but also multimedia and web-ready product (featuring community development productions) in 12 remote and urban communities, with a further 14 planned or under negotiation for 2007–08.

FINDINGS AND EXPERIENCES

The evaluation of the wider project involved both quantitative and qualitative approaches. Quantitative information was trace data obtained from four kiosks in remote Cape York communities that were collected across six 1-week time periods, three before and three after the deployment of the multimedia module. One of these communities was the community enhancement site in which *'Put it on'* was produced. Qualitative findings came from 100 individual and group interviews across key informants, clinic staff and community members. The project adopted an action

research framework with the experiences of the project staff informing the ongoing project structure. In relation to the narrative multimedia module, this resulted in recognition of the need for:

- community member involvement in the creation of new content from consultation, story creation, script writing and casting through to filming, in order to ensure local relevance and style, and meaningful participation;
- employment contracts to ensure community actors/participants receive award wages (influencing drive, commitment and self-determination) to encourage a robust work ethic and to understand copyright conditions;
- use of the production process itself, the final product, and the celebratory community launch (involving actors/participants) as opportunities to engage individuals, families and the community in other health and media-related activities to ensure wider promotion of the project (this last element is also an important vehicle for restoring community pride);
- partnership development with local health service providers in communities where modules are produced to ensure ongoing health promotion activities capitalize on opportunities created to engage people in the issue;
- strategies for sequential film production in communities to harness the participatory environment that these activities create. As noted by the Co-director of *'Put it on'*: ''I think that the highlight for me was on the final day when we reshot the rap scene and we moved the location to the beach. I was really surprised to see a lot of young males, unpressured, following us down to be a part of the rap scene. Throughout the week they were shy, looking in but not coming forward. It took a while for them to actively be a part of that, but it was good to see how they all wanted to be a part of filming in the end and forgot about the shame part of it.''

Interviews were undertaken with the young people participating as actors in the production immediately after filming was completed. In these interviews the informants reported that:

- awareness of sexual health as an issue had increased, although it is not at all clear whether this had translated into an increase in functional knowledge;
- they felt that they now had a greater sense of responsibility around these issues towards others in the community because of their 'role model' status;
- the individual experience was empowering in that none had ever acted before. For instance, a 15-year-old male informant whose circumstances in life had been very challenging explained that he felt that over the 5 days of filming that his confidence grew. He felt himself ''coming out'' and that by the end of this time ''I feel like there's nothing I couldn't do''. He went on to state that he had now found something in life that he felt he could do well at and that he now had an ambition – to be an actor;
- these young people were all engaged through formal contracts. This entailed responsibilities to which all lived up – on time each day and cooperating throughout;
- the presence in the community of a professional film team, which included highly regarded Indigenous professionals, was a powerful role-modelling, mentoring experience.

The HITnet Community Engagement Coordinator had been involved as an actor in this production and noted how the production of *'Put it on'* addressed issues of self-esteem and community pride. This resonates with comments from two of the other participant/actors in *'Put it on'* (females aged 16 and 17 years) who were interviewed 7 months after filming and who spoke at some length about their increased knowledge of sexual health and health-related behaviours. One (sadly) noting: ''The movie's good. I think they should put one on in [community X]. They have lots of STIs there. My cousin ... She is my age and she has two kids. She is really struggling''. On being asked about personal change one reported:

> ... my attitude. I used to go out partying with my friends and get really drunk, then those boys would come around and take advantage of us. I stopped drinking after making the movie. It wasn't about the drinking. It was about sex and disease. I started to think: If I get those diseases, in the future my mum wouldn't have grandchildren. I might lose my friends too if I got some disease.

The importance of local production was noted both for interest within the community generally, and more specifically for participants, one young woman relating that she now intended to go to media school. Another young person had similar comments and noted that while she knew many of the issues raised through formal education programs: ''I learned what you have to do at the hospital. I am able to help a lot of other people now. I am able to encourage them to go to the hospital, not so much playing a different role, but with my friends, they ask me for advice now''. She added that:

> Songs were a big thing. The kids from the community came in and helped us with it. At first when it came out they used to come and ask if there was going to be another one and if they could be involved in the next one. Another one would be good. Young couples and having children at a young age, there is a lot of that in the community at the moment. They just drop out of school and have kids. Some are happy – some are not. I think it's a problem, and they are dropping out of school, mostly in year 10 and 11 – four girls dropped out.

The local health service sexual health coordinator with responsibility for this community gave comments that support the above, adding that:

> Kids say I should ''put it on – put it on'' when I am contact tracing. It has become a bit of a catch phrase. When I ask them why they didn't use a condom they say 'I was drunk' or 'I was stoned'. Feedback from the kids [about *'Put it on'*] is that they like it. They see their own peers that they identify with, they see their own location, their own back yard. And it rings true ... The reason that it is so good is that engaging kids from [the community] is really difficult.

Key informant interviews suggested that the module had encouraged particular groups to attend the health centre, the administration officer noting: ''more people are coming to the clinic to see the screens. But maybe they are coming to take condoms'', adding in relation to the visual presentations that: ''some people can't even read. They need movies and they need to talk their own lingo ... Tell them what's going to happen to them, like on cigarette packets, treat beer like cigarette packets''.

The social and economic coordinator employed by the local Council noted:

> The DVD [*'Put it on'*] was really popular. We presented it at the youth centre in February. We had a barbecue. There were about 60 kids and 20 or 30 adults. The response was overwhelmingly positive. There was lots of laughs. The adults said it was good for the kids to get this information. One woman said we should do it again. There has been no negative feedback. We absolutely want to go ahead with the Hip Hop workshop. It provides a different experience for our kids. They learn new skills, see different things, have positive role models ...

> This kind of intervention is brilliant because it encourages participation, then the awareness about the whole message is elevated. The kids got really engaged in the process. Having the screening and having the touchscreen feeds it back to the community. I have five youth workers and they are all really keen to see it happen again. We are getting the Police and Citizens Youth Club (PCYC) involved in the centre.

Quantitative data were obtained from trace data analysis of over 6500 purposeful uses across the six collection periods which demonstrated that among those users who identified age and sex, there were similar proportions by gender and age distribution. The vast majority of users (>90%) activated content-rich material (an index of 'purposive use' rather than random 'passing by' activation). Kiosk use was consistent over time with preference for problem-solving or activity-oriented content (rather than 'flat' information provision) in the didactic, non-narrative health education modules. Introduction of the narrative multimedia modules resulted in a significant increase in average session duration from around 5 minutes (which is similar to the proof of concept study) to 10 minutes. Across all four communities this became the most frequently accessed module with consistently higher levels of use in the community in which *'Put it on'* was filmed. Analysis of random selections of activation sequences allows the sequence of individual uses to be traced, providing a means of exploring the logic of use. For instance, two uses documented in the full report reveal very different patterns. One shows a user who interacts with this module for 12 minutes. One scenario (seduction leading to sex with a condom) is activated and the user leaves the session. The second is quite different. This user (presumed on the basis of sequence and timing) is engaged with the module for over 30 minutes and explores three options – seduction but decision not to have sex; sex without a condom and having a checkup; and sex using a condom. This pattern of use suggests purposefully exploring behaviour and consequences.

DISCUSSION

This HITnet project demonstrated that kiosk-based approaches are feasible in very remote and challenging environments and are used by community members. While this is consistent with previous work,[12,13] the challenge of demonstrating quantitative evidence of health outcomes in terms of health literacy or behaviour gains in this population remains. However, a significant further outcome of the HITnet project arose from both specifically addressing community engagement and localizing production and support. During this process, community enhancement occurred as local capacity emerged through the various stages of the project to address choice in relation to health behaviour. The use of narrative and interactive approaches empowered the community to take control of and expand the applications of this project locally. Such community capacity-building required time, effort, skilled expertise and resources in communities and was underpinned by an appreciation of local cultural norms and processes. It has also led to development of further narrative, interactive, multimedia projects.

This is consistent with Kickbusch's observation that most populations, particularly in the developing world, learn through listening and watching rather than literacy-dependent media.[9] Media representation of Indigenous people is often unstated but has effect on identity and self esteem – both in terms of prevailing stereotypes and 'invisibility'.[17] The qualitative information presented here suggests a positive impact on individuals' self esteem as they engaged in creating their own representations. Furthermore, the end product – the HITnet kiosk facility – provides capacity for on-demand information, independent of staffing, in remote and challenging environments and is sustainable. This has particular relevance for mental health where low levels of mental health literacy exists, even among health staff. However, this project also demonstrated that a significant gap remains between information provision and incorporation into health practice.[16]

Regarding the economics of such interventions, the cost needs to take into account the excess burden of disease and disability, difficulties of access and contact, the challenges of maintaining conventional

health promotion resources current, collateral outcomes in terms of personal growth and self esteem, and community capacity. To date, all of the existing HITnet modules target behavioural determinants of Indigenous health (smoking, substance use, diabetes, nutrition, sexual health and child health). The approach described in this paper lends itself to addressing mental health, both in terms of content and process, and is being used to develop a suite of mental health resources. In such disadvantaged populations we believe that use of innovative technology is a way of reducing inequality in terms of health, education and digital engagement. Furthermore, in so addressing the 'triple divide' this initiative may contribute to challenging the mental health disadvantage of Indigenous Australians – the 'triple jeopardy'.[18]

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