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Creating premises for indigenous Australians

Since the beginning of the 20th Century, life expectancy has increased markedly for Australians overall, reflecting improvements in areas such as public health and medical interventions. However, as we approach the second decade of the 21st Century, indigenous Australians have, on average, the same life expectancies as the total Australian population 100 years ago.

The significantly lower life expectancy of indigenous Australians, compared with the average Australian population, reflects their higher death rates at all ages. This is largely the result of relatively high death rates in adulthood, especially between the ages of 45 and 65 years. In the period 1998-2000, deaths of people aged 25 years and over accounted for 18 years of the 21 year gap in male life expectancy and 17 years of the 20 year difference in female life expectancy between the indigenous population and the total Australian population.[1]

Good news is that a recent study has claimed that dire death rates for indigenous Australians suffering chronic diseases have shown their first tentative signs of slowing down. However, mortality rates for the total Australian population have improved much faster. This has served to widen the gap between the groups.[2]

Focus on community controlled health

The first Aboriginal medical service was established in Redfern in Sydney in 1971 shortly after the establishment of a local Aboriginal legal service. Redfern, and other early medical services around the country, reflected the aspirations of indigenous Australians for self-determination as well as a frustration with, and alienation from, mainstream services that had a less than desirable tolerance and recognition of the specific needs of indigenous Australians.

These early Aboriginal medical services provided sites for community development, political advocacy and the intellectual development of a cultural identity and social "movement". Their innovative approaches and focus on holistic, culturally appropriate and self-determined health services foreshadowed the international Declaration on Primary Health Care, which was agreed to at Alma-Ata (now known as Almaty in present day Kazakhstan) in 1978, with its assertion of the importance and effectiveness of comprehensive primary health care.

Currently, the delivery of health and health-related services to indigenous Australians is primarily the responsibility of Australian state and territory governments. Sponsorship of Aboriginal Community Controlled Health Services (ACCHSs) is provided across all three levels of government (Commonwealth, state/territory and local) to provide culturally valid and bespoke process-specific health services that form an important part of the overall health system.

In the same way that general practice is the backbone of the mainstream primary care system, when it comes to addressing ill health in the indigenous community, ACCHSs, and their associated health services, are the central part of the primary health care sector.

The specific community approach is intended to provide innovative clinical and health development services where cultural imperatives, social realities and technical necessities are taken into balanced account.[3]

ACCHSs have adopted an approach to health service delivery that utilises current recognised medical diagnostic and treatment processes, in an environment that is in keeping with the philosophy of Aboriginal community control. The approach is responsive to the community's social and cultural determinants of perceptions of health and illness, of health status and of the perceptions of appropriate responses to poor health that this entails.

It has been stated that the solution to address the ill health of Aboriginal people can only be achieved by local Aboriginal people controlling the process of healthcare delivery. Aboriginal community control allows Aboriginal communities to determine their own affairs, protocols and procedures.[3]

In practice, "community control" means that each ACCHS is legally incorporated, independent of government and other ACCHSs, and has a board of directors and/or governing committee comprising community people selected by and representing the organisation's community membership.

The ACCHS model essentially requires that ownership and management of the health agency are taken on by the local Aboriginal and Torres Strait Islander (ATSI) community, generally through a local ATSI board of management. This arrangement allows the local community to decide on priorities, policies, management structure, staff and service profile, within government funding guidelines.[4]

'In the design of indigenous health infrastructure, there is a need to consider important local variations and characteristics that are particular to individual health services and client populations.'

Rob Issacs

Rob Isaacs is a senior associate with Arup and is the leader of the programme and project management practice in NSW. He joined Arup in 1987 as a structural engineer and since 1992 has worked almost exclusively in the field of programme and project management. Rob Isaacs has been closely involved in Arup's work with indigenous Australians since 1994, in all states and territories.

Doug Kingham

Doug Kingham is a senior project manager with Arup's programme and project management practice in NSW. He joined Arup in 2006 after working as a project engineer in the US and the UK. Doug Kingham has spent most of his three years with Arup working as a programme and project manager providing health infrastructure for indigenous and non-indigenous Australians.

Arup is a global firm of designers, engineers, planners and business consultants providing a diverse range of professional services to clients.

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All Australian governments have a formal commitment to the ongoing funding of ACCHSs and to the principle of "community control". In July 1995, the Australian Government transferred responsibility for indigenous Australian health from the Aboriginal and Torres Strait Islander Commission to the Commonwealth Department of Health and Ageing's portfolio, along with funding responsibility for over 200 community controlled health and health related organisations, located in urban, rural and remote areas.

Engaged as programme manager

Since 2000, Arup has been engaged as the programme manager for the Commonwealth's capital works projects that focus on indigenous health infrastructure. The purpose of this support is to provide best value for money health facilities that enable funded ACCHSs to deliver high quality healthcare services which meet the needs of their stakeholder communities.

As the capital works programme manager, Arup facilitates the engagement of third party project management consultants and architects to deliver health clinics, substance misuse centres and staff housing around the country. The consultants who are engaged are in businesses ranging from small, one or two person firms to large, global consultancies. They have varying skills and experience when it comes to health infrastructure delivery throughout Australia. As such, one of Arup's primary responsibilities is to work with and guide the consultants to maintain consistency around the country in terms of the end product.

Design considerations

In the design of indigenous health infrastructure, there is a need to consider important local variations and characteristics that are particular to individual health services and client populations. In order to ensure fit to local needs, it is necessary for the consultant that is managing the individual capital works projects to gain a familiarity with the local context, which can be accomplished through detailed discussions with experienced local individuals and organisations.

The following sections contain some of the more important considerations which designers employ.

Cultural factors

Cultural factors vary substantially between communities across Australia. Relevant factors that are considered and consulted on broadly with the community include the following:

- The concept of death.
- Perceptions of personal/gender privacy.
- Spiritual issues.
- Family and community social structure and relationships.
- Gender and age relationships and "avoidance" practices.

Striking, appropiate design.

For example, in some indigenous communities a son-in-law must not be in the same room with his mother-in-law. In order to accommodate these relationships and other cultural factors, key design considerations include:

- Discreet entry/exit points for men's/women's health services.
- Separate men's and women's consultation/treatment areas large enough for group consultations.
- Separate men's and women's toilet/bathroom amenities with planning to provide discreet, private entry/exit from amenities.
- Overall design to provide a comfortable and inviting environment.
- Protected external waiting areas and general community meeting space.
- Generous internal waiting areas for extended family visitation.
- High level of privacy provision for consultation and treatment areas.
- Location and provision of body holding facility.

Consultation with the community during the early design phase of a project not only helps the consultant ascertain the needs of the community, but it also helps to create a sense of ownership among the indigenous community.

Disaster management

As with any health facility, disaster management will factor in the design process. Buildings must be designed to continue to function in the event of a disaster/emergency.

Generic design considerations include designing the facilities to be flexible in regards to consultation, examination and treatment areas so that emergency situations, such as flu epidemics, can be accommodated. In addition, patient and staff security must be taken into account.

And while having an emergency power supply is an important element for any health facility, the remoteness of many indigenous communities makes this even more critical. Even with an emergency power supply, blackouts can still occur, so design consultants are encouraged to design treatment areas in the facilities with sufficient natural light to maintain use.

Acoustics

Remote community health facilities often attract large gatherings of people, including children. Control of noise and protection of client privacy and confidentiality are essential for the effective management of a facility.

In the design process, consideration is often given to the following:

- Provision of generous and pleasant outdoor waiting areas to reduce demand on internal spaces.
- Planning of facility to separate areas requiring privacy or quiet from other noisier areas.
- Selection of sound absorbing materials and finishes to reduce overall background noise levels.
- Where specialist activities require high levels of sound insulation, alternative construction systems including separated wall framing to achieve necessary levels of isolation may need consideration.

Natural light and ventilation

In addition to playing a role in disaster management, access of natural light and ventilation to all functional areas of a facility can assist in improving the overall amenity of the facility as well as reduce energy/running costs.

In design, consideration of the following is important:

- Large clear panel windows for staff and general public areas provide a pleasant outlook as well as a way to observe outside activity.
- Provision of high level openings with

Transporting structures in the Australian bush.

Completed facility.

obscured/opaque panels to consultation/treatment areas for privacy reasons.
- Roof/skylights over critical treatment areas in the facility.
- Staff management and impact on mechanical services and running costs.
- Dust control.

Health facilities with sufficient natural light have also proved to be more inviting and pleasant for patients, which is important as many indigenous Australians can be reluctant to visit health clinics on a regular basis.

Dust control

Dust is a major issue in many remote communities and has a significant impact on the health of community members.

Consideration is given to the following:

- Reducing dust around the perimeter of the facility through:
  - Orientation of building and entry away from prevailing dust-carrying winds.
  - Control of vehicular movement on and around the site including car parking.
  - Surface treatment of driveways, parking areas and footpaths.
  - General landscaping and wind breaks to the perimeter of the site.
- Reducing dust entering the facility through:
  - External door and frame detail and construction including all round weather strips/seals.
  - High level window openings.
  - Construction detailing to ensure external perimeter of the building is sealed, especially wall/floor junctions.

Passive thermal performance

Building design should also be sensitive to the local environment and prevailing climatic conditions to minimise external energy running costs and maximise the comfort of the users of the facility.

Passive design measures employed need to recognise availability of staff time, the training necessary and high staff turnover and expertise with respect to managing any systems. Due to the remoteness of many communities, maintenance contractors and spare parts can take a considerable time to arrive. As such, only systems that are "self managed" should be explored.

Consideration should be given to:

- Orientation and protection of the building to minimise solar radiation.
- Orientation, plan form and position of opening windows to maximise cross ventilation.
- Thermal mass in construction.
- Thermal insulation of all external walls and roof planes.
- Thermal insulation between air conditioned zones within the facility.

Logistical and seasonal challenges

Perhaps one of the biggest challenges when delivering a new indigenous health facility comes down to logistics. The majority of indigenous health facilities are outside of metropolitan areas and major town centres, and some are only accessible by barge or plane. This can add a significant amount of cost to capital works projects, as well as increase the operational and maintenance costs.

The location of a community can also reduce the number of quality consultants, contractors and other service providers who are available, and this can also add cost and complexity.

In addition, remote indigenous communities can be cut off during the wet season in parts of the Northern Territory, Western Australia and Queensland. This reduces the window for construction to approximately seven or eight months of the year.

Progress to date and looking ahead

Since 2000, Arup has completed over 215 indigenous health infrastructure projects around Australia with a combined capital works value of nearly $200 million. These projects have ranged from feasibility studies to staff housing to primary health clinics. The improved health infrastructure, combined with continued Commonwealth funding and support for dedicated indigenous health programmes, has helped to improve the lives of indigenous Australians.

Fiona Lynch, former assistant secretary, Department of Health and Ageing, said: "Arup's work is an excellent demonstration of how it is possible for Australia to deliver a built environment that meets the challenge of the nation's changing demography through interdisciplinary collaboration between governments, professions and health service organisations."

There are still, however, dozens of communities around Australia that are in need of improved health infrastructure. The Australian Government is continuing to tackle health problems around the country through a combination of health infrastructure projects, improved health programmes, and education and training for indigenous Australians.

Conclusion

The Australian Government is committed to closing the gap in health outcomes between indigenous and non-indigenous Australians. Arup's involvement, ensuring the delivery of new and improved health infrastructure that represents value for money and meets community needs, is a key element of this process.

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Dramatic Australian landscapes.

'Cultural factors vary substantially between communities across Australia.'

Arup, as a firm, has a commitment to communities and sustainable development. Good infrastructure undeniably improves lives, and good, sustainable infrastructure goes one important step further. It shows how we can improve lives in the future, as well as today, helping to create a positive legacy for generations to come.

Acknowledgements

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