Submission 153

Impact of Cognitive Disability and the Development of Long Term Strategies for the Ageing Population of Australia over the next 40 years

Problem

Civilisation and longevity go hand-in-hand, and with that longevity there is a greater chance of an aged person suffering some degree of cognitive disability ranging from minimal to maximum in intensity. Cognitive disability can be absolutely devastating for the individual, the family and the community.

Advanced, democratic countries have experienced unrelenting accelerated changes over the past 20 years, whilst at the same time retaining strongly held beliefs about ageing e.g. retirement age

Today's aged population and middle aged population are finding it increasingly difficult to cope with and adapt to change in many areas of their lives, whilst still taking on the nurturing and caring roles and responsibilities embedded in family life. Changes can be extremely taxing, and are made even more so when one or more family members have cognitive disability.

Facts concerning a Cognitive Disability

So why has this disability in the aged not been fully understood until now:-

- Last century two Soviet psychologists presented studies relating to brain function observed through activity, these studies where expanded upon by Professor Claudia Allen when she presented the prestigious 1987 Eleanor Clarke Slagle Lecture to the American Association of Occupational Therapists. In his book 'The Working Brain', the distinguished Russian neuro-psychologist Luria acknowledged the existence of global cognition but chose to work with focal deficits of the brain.

- Everyone is aware of the stages in the development of ability in babies and young children, yet few people are aware that there is an equal decline in ability with ageing. As individuals 'go up' the scale of levels.modes, they master those levels.modes and integrate the sensori-motor information they gain. Conversely, as an individual 'goes down' the scale of levels.modes, they are not able to use the skills associated with the higher levels.modes. Cognitive decline is concealed by habits, routines and rituals developed over a lifetime.

- A cognitive disability can be concealed by the thick strata of habits that have accumulated in the basal ganglia of the brain. Coupled with a high level of verbal skills, this may mask mild, moderate and severe cognitive deficits, for 'When differences are invisible, they can often be overlooked'. A limited capacity to think and feel in order to function, or to adapt to change, is pervasive, spreading out through every aspect of a person's life.

- It is the **biologically pre-determined ability** to attend to and functionally process sensory information using external cues. The capacity to function follows a sequential order of cognitive complexity that is programmed into human biology. How a person is able to pay attention defines the performance level.mode on the Allen Cognitive Scale.

- Historically, the cognitive and physical components of disability have been assessed and treated separately. In reality, they are intrinsically related, as the central executive style operation of the prefrontal lobes of the brain organises function and behaviour as well as being responsible for coordinating the activities of the sensory regions of the brain. As with physical disabilities, a cognitive disability limits a person's participation and involvement in life situations.

- In 1987 Claudia Allen, together with her husband who was a Professor of Psychiatry at the University of Southern California, published a paper which stated that **20% of the general population** has a cognitive disability. People with a mild disability can talk and walk normally, but their disability **only** becomes apparent when they have to change their work pace and/or learn new skills.

- Human brain functions are recorded by measurement either of their electro-chemical activities or of the **bodily behaviours** that by **intention** represent their internal state-(Freeman 2000). The Allen Cognitive Levels Scale measures bodily functions and function is what humans do.
- Behavioural problems occur in response to the whole brain's inability to switch to global and exploratory forms of reactions. Aged people with a cognitive disability have no concept of why they are not able to do the things they used to be able to do, and vehemently deny there is anything wrong with their ability to manage their own affairs.
- The brain being a dynamic complex system, which thrives on novel and trial and error learning, is affected by the level of mental and sensori-stimulation from the environment, not age.

Consequences at the National Level

IN GENERAL

CONCERN	CONSEQUENCE	RECOMMENDATION
Just as a physical disability restricts the physical ability to make a voluntary motor action, a cognitive disability restricts the cognitive ability to make a voluntary motor action.	When the capacity to function is reduced, the cognitive complexity of a task demand becomes apparent. Therefore, elderly people with cognitive disability are unable to perform everyday life tasks and need assistance from others.	Measurement of a person's problem solving skills to be undertaken by trained therapists who can ascertain the person's capabilities and alert caregivers by making recommendations for care and appropriate safety measures. Instigate a campaign to inform the general public of the existence of the subtle, hidden, irreversible characteristics of cognitive disability. Stressing the devastating effect it has on all areas of the person's life and the disruptive effect on the life's of close family members and carers. **Note:** Awareness at national and community levels will have a flow-on effect generating empathy and understanding of why people with cognitive disability behave the way they do. How to limit the occurrence of cognitive disability (see below)
The inability of elderly people with cognitive disability to learn new ways or adjust to changes in either environmental or physical conditions. New learning for the ageing is not actively encouraged by the community.	New disability requires new learning, re-learning is harder than learning because working memory has to overcome procedural memory.	There is emerging evidence that suggests education and learning activities across a lifespan makes an important contribution to brain wellness and may serve to slow and even prevent neuro-degenerative disorders in later life. (Nussbaum, P.D. (1997). When the learning activity is combined with doing an activity, the impact of learning is much higher (Jones, W. (2002). The need is to regard education and learning as being part of a healthy lifestyle, no different than exercise or nutrition. Over the next forty years all areas of new learning must be encouraged, with the reasons why fully explained and emphasised. Banks, commerical premises and businesses that service the general public must be made aware of the best ways to assist older people to cope with new technology. Time will be an issue for many businesses, but

		the consequences of not providing assistance can have an increasing negative impact in future years.
Physical inactivity of people over the age of 55 years. The greatest barrier to becoming involved in a 'LiveLife' fitness program will be an older persons perception of time and accessibility.	Unless people over the age of 55 years become active, many will need to be placed on medications for cardiovascular, heart, diabetes and cardiopulmonary diseases. All these conditions can cause medical health problems, leading to more serious complications and side effects. These conditions and their medications can affect cognitive ability. Lack of physical exercise and resultant poor lung function will do nothing to enhance the function of the central nervous system, and especially memory. *'No one is too old to develop stronger muscles'* – Michele Stanley, PT, Allen Cognitive Advisor	A proactive Federal Government campaign to develop 'Live-Life' Centres, for people over fifty-five, to be established throughout the nation. Programs to be based on the 'Wellness' programs that have developed in USA hospitals such as East Jefferson General Hospital. Although similar concepts have already been developed in Australia, they are used in centres that are based on the medical model and even in private hospitals. 'LiveLife' centres can also serve as a meeting place where healthy lunches can be served and where trained staff can assess both the cognitive and physical abilities of their clients. Attendance can be voluntary or by referral from health care professionals, in particular General Practitioners. Physicians in the USA feel comfortable referring their elderly clients to the programs which are well supervised and are delivered by staff who have a minimum of a four-year degree in exercise science (human movements). Many centres also have a rehabilitation focus where physiotherapists, occupational therapists and others provide therapy services. As with subsidised childcare centres, there should be federal government subsidised 'LiveLife' Centres to maintain the health of people over the age of fifty-five.
Poor diet and lack of understanding of healthy dietary requirements.	Cardiovascular disease, respiratory problems and diabetes, and their medications, can affect cognition. There is ample evidence to suggest that the more serious cardiovascular conditions (atherosclerosis and cerebrovascular disease) increase the risk and extent of cognitive decline (Levy, 1998). It is also evident that medications that prevent subtle brain changes due to hypertension, low blood pressure and elevated blood sugar have an important impact on the occurrence of cognitive impairment (Launer et al). 1995).	Last month, The World Health Organisation (WHO) and the UN Food and Agriculture Organisation (FAO) launched *'Diet, Nutrition and the Prevention of Chronic Diseases'*. This is a report by joint consultation involving more than 60 experts over two years, containing the best scientific evidence on the relationship between diet, nutrition, physical activity and chronic diseases. The report recommends that no more than 10 per cent of calories should come from added refined sugar. Therefore, a tax and written warnings need to be placed on sweetened foods items, if sugar content exceeds the recommended 10%. The warnings, similar to those placed on packets of cigarettes, would have an immediate impact on consumers by warning of the dangers of the excessive consumption of sugar products.
Limited or no understanding of what can occur if people do not maintain a healthy lifestyle, continue to actively keep abreast of new technology, engage in education pursuits and of the need for them to continually make changes to and plan for their future health requirements.	If people do not continue with active learning, which maintains mental fitness, and do not continue to be creative, curious, optimistic, flexible and challenge their brain to make new connections, they will begin to lose cognitive ability. Education is the strongest predictor of sustained mental energy.	For education to be effective there must be a component of doing a task/activity whilst learning. When the 'learning' activity is different from the 'doing' activity benefits are limited. With this in mind specially designed education programs need to be developed by education experts, guided by the latest research developments using dynamic, complex theory principles. To maintain mental fitness in people over the age of 55 years,

The continually widening technological digital divide in people over the age of 55 years. The use of this technology requires new learning and perseverance to apply new skills. This is beyond those who have varying cognitive disabilities, as stated before, approximately 20% of the population. A lack of a sense of self-efficacy, which is the belief that one can accomplish tasks can lead to improved performance of many kinds involving cognitive function.	The nation cannot afford to have so many older adults that are ignorant of technology. The main reason older adults do not want to learn is 'fear' and making fools of themselves or of being shown up, which they would prefer to avoid. This reaction has been well established by habit, which was generated during their early school years. Unless people over the age of 55 years try to learn new technology and new methods, they begin a downward spiral of unused abilities.	these education programs need to be run continually in all education centres around the country. School space is underutilized and over fifties should be highly encourage to learn how to use computers and any other digital equipment. The difference between an older person's ability to learn versus younger adults is that their brain processing speed is slower. This must be understood by all who take up teaching roles.
A perceived belief that aged people need to come under the wing of a medical model, therefore, wellness programs and day therapy programs are connected to and funded by health related monies. The fact is that nearly 70% of adults over the age 65 years are functioning adequately and some with minimal cognitive disability, who are nearly independent are able to carry out meaningful activities.	The myths: • Ageing is viewed as a health issue. • Elderly people need to have their health constantly monitored. • Aged people cannot be taken seriously. (Ageism is a biased mindset, established in young children as early as 8 years of age)	There is a high need to reduce the over-reliance on health care systems, which are disease driven systems, as outlined in the World Health Organisation (WHO) - International Statistical Classification of Diseases and Related Health Problems, tenth revision. A stronger focus needs to be given to the World Health Organsation (WHO) - International Classification of Functioning Disability and Health (*ICF*)(2001). Thus the establishment of 'LiveLife' centres, which are based on a consequnce model of wellness, ensures people maintain and retain their best ability to function. The nation's educational system can assist with the myths by confronting ageism and by establishing a curriculum in schools, which includes ageing.
Duplication of communication and information is provided by many different agencies and caregiver groups to people trying to find answers when they begin the long journey to assist an elderly relative or friend.	Precious time is lost trying to get answers to the many confronting concerns. Although the information is commonplace to the agency it is very new and disturbing to people who have just realised they need to take on a caring role. There has to be greater empathy and understanding shown to caregivers by the different agencies.	Committees to be developed with all stakeholders in the different agencies agreeing on the content of standard handouts to consumers. All problem areas need to be addressed including environmental adaptation requirements, how the one they are caring for may be trying to think and that the behavioural outbursts are part of their cognitive disability.

PROTECTION FOR PEOPLE WHO HAVE A MINIMAL COGNITIVE DISABILITY (LEVEL.MODE 5.0 TO 5.8)

CONCERN	CONSEQUENCE	RECOMMENDATION
Aged people with a mild cognitive disability (level.mode 5.0 to 5.8) suffer the greatest lack of understanding by their families, the community and the nation. They have good verbal skills with intonations and speech expressions, as well as facial expressions as they communicate, all of which successfully mask their cognitive disability.	They follow their established routines and habits but no longer have the ability to make sound judgements. The money they have saved from the working phase of their lives can be lost on the share market, investing in schemes put forward by fast talking sales people and through gambling.	Television, radio and other forms of media can provide information on the neglected positive facts of ageing and as well inform listeners and readers of the importance of healthy lifestyle choices and the consequences of not choosing to take advice. One consequence being a minimal cognitive disability. Unfortunately, sometimes there is no solution, particularly in aged people who have a predisposing mental disorder or health problem, have suffered head injury with resultant damage to the frontal lobes of the brain or have abused alcohol and drugs. The resulting behaviour can be devastating for caregivers who require enormous support emotionally, physically and financially. Caregivers of this group of people need specialised assistance to keep them focused and safe. Once caregivers understand why the person is acting the way they do, this takes the pressure away from the person with cognitive disability, as understanding and empathy develops.
The related emotional behaviour can be out of character, such as making inappropriate remarks that are sarcastic, flippant or improperly personal.	No longer is it possible for them to reason their reactions or internally hold their emotional outbursts in check. Their behaviour and verbal abuse are extremely hurtful and stressful to their families, friends and work colleagues. At the higher levels.modes of cognitive disability, they can apologise for their outbursts, but they cannot prevent them occurring. Many wasted hours are spent trying to get these people to stop reacting the way they do. Health professionals spend endless hours counselling them, thus millions of dollars are spent trying to change something that has a biological basis.	
This mild cognitive disability is not acknowledged as a true disability, but leaves family caregivers, friends and work colleagues utterly perplexed how to seek help to handle the situation.		

FAMILY CAREGIVERS

CONCERN	CONSEQUENCE	RECOMMENDATION
Lack of family involvement in assisting and caring for ageing relatives.	The relocating of family members throughout Australia and in some cases, better work opportunities in other countries, means either there is no one available to assist ageing parents or that one member of the family is landed with the full burden of care. This can be at a huge cost personally, emotionally and financially to that person.	Active encouragement and support, to facilitate the necessity of families units, through all avenues of media. Active encouragement and support to promote the important role caregivers provide to the community. Added caregiver assistance for those members of a family who have only limited hours in a week, but still take on the sole responsibility of care for an aged relative. Four hours a week is barely time for them to complete what they have to do e.g post mail, pay accounts. There is no personal time to just relax or go out and enjoy a break. Education for caregivers, to give them an understanding of the
Caregivers have little or no understanding of cognitive deficits/disability.	Stress and burn out of caregivers caused by trying to get their elderly relatives to do activities that they are not able to learn.	
Inequity of care funding for caregivers of aged people with cognitive disability compared to caregivers of people who are intellectually	The family caregivers exhausted by 24 hours of caregiving and having to continually prompt and drill their loved ones, whilst answering the same questions over and over again, only to be allocated limited respite	

challenged. The difference being one has a wealth of habits and routines, the other group has not been able to develop habits or routines, except by rote learning or through drilling by caregivers. Both groups of people require the same care.	each week. These family caregivers are vital if their loved ones are to remain in the community. They take on a huge burden of care, as the relative, because of their cognitive disabilities, use their caregivers mental energy to get through each day. This can generate tremendous strain and fatigue for both formal and informal caregivers.	reasons why their loved ones are trying so hard to think and make sense of their world. Once caregivers have an understanding of what is happening it can be a huge relief for them and it is at this stage they stop pushing the person they are caring for to change their ways or conform to socially expected norms.
Young children being left in the care of elderly people with cognitive disabilities, who are not able to safely care for young children.	Unless an elderly person is functioning in the high level.modes of a cognitive disability they cannot safely take on the responsible of child minding. Both the elderly person and the child or children are at risk of injury. 10 year old children cannot be responsible for minding a young toddler, equally an elderly person functioning at level.mode 5.0 does not have the cognitive ability to mind a child.	Education of the general public about this insidious, hidden disability that prevents some elderly people from being able to care for themselves and who more importantly cannot take on the responsible for the care of very young children for any length of time.

COMMUNITY LIVING ARRANGEMENTS

CONCERN	CONSEQUENCE	RECOMMENDATION
Family homes, privately owned, which have non-functional bathrooms with unsafe access that could prevent aged people from continuing to live independently for as long as possible. When aged people with cognitive disability do require assistance, they are not able to conceptualise the need to make the house safe for themselves or others. Long held beliefs on how they handle their finances will over-ride the decision to make the home safe.	When aged people with cognitive disability do require assistance with showering, toileting and transportation access is dangerous and cramped. Doorways and access into homes can be narrow and dangerous, not only for the aged person but for all people employed to assist the elderly to remain independent. Ambulance officers are at particular risk when they need to use a stretcher to take the person from their home to hospital and then on returning them to their place of residence.	Establish a requirement for all new homes, and renovations to existing homes, to be built to the Australian "Adaptable Housing Standard (AS 4299)" principles. This is vitally important for formal caregivers who work in private homes; they must protect themselves and their clients from serious accidents and injury. When there is no money available to make necessary home adaptations, this money to be loaned, with the loan recouped following death and/or on the sale of the home. Careful planning needs to be considered understanding many aged people have long held beliefs, which are hard wired in their procedural memories. They will not entertain any thought of releasing their property deeds to be held by a bank or any other institution. Therefore, careful planning is imperative.
Hostels, boarding houses, caravan parks and over 50's mobile home sites, which operate with non-functional bathrooms and toilet facilities, and with steps or ramps that are poorly graded.		As there are access standards in place in hospitals and commercial buildings where people work, then there should be enforced Adaptable Housing Standards in residential homes, boarding houses, caravan parks and over 50's mobile homes, anywhere aged people live and may need assistance from formal caregivers.

RESIDENTIAL CARE FACILITIES

CONCERN	CONSEQUENCE	RECOMMENDATION
Nursing homes were built post-World War II and represented a warehousing model of care, little has changed in today's residential care facilities.	Many of these places are privately owned residential care facilities run primarily as viable businesses making profit for the owners. The responsibility for running these facilities, including the legal ramifications, is invariably placed fairly and squarely in the lap of each care facility's Director of Nursing, the owner being the silent partner.	The position of Director of Nursing should be seen as a role model for staff. The 'Eden Alternative' program or transformation needs to be instigated by the Director of Nursing with the support of the owners. There needs to be a flow through of wellbeing and empathetic care to the level of the resident. Once a person's cognitive level.mode is ascertained the amount of assistance they require should dictate the number of personal care assistance, which are required to maintain these aged people at their level.mode of function. It is just not looking after their medication and activities of daily living, all staff need to be involved in keeping aged people involved in life pursuits. This means they need daily exercise and/or walking, they need to be doing useful activities and they need to be included in sensory stimulation programs. They have to be engaged in life to maintain their cognitive level of function.
Limited and often grossly inadequate assistance and time being made available for aged people with cognitive disability.	It is at the service level to the residents that hours are readily cut, to maintain the percentage of investment for owners. Meaning safety and adequate care is compromised. There is limited time allocated to assist aged people to hold their present level.mode of function. This need is imperative to prevent them slipping further down the scale, which in the long run requires heavy nursing and more hours.	
Poorly designed high care residential care facilities, with only limited areas within each residential wing for residents to participate in group activities.	Where there are no areas for elderly people with cognitive disabilities to actively continue to use their long learnt habits and skills such as food preparation (which is one of the most important skills for triggering activity and participation by the elderly).	There are insufficient alcoves set aside for activities situated in each wing of a residential care facility including dementia areas. This needs to be corrected as it is well documented that people need to continue learning throughout their lifetime. Doing activity is health-promoting. It is a human need to be able to do meaningful activities, therefore tasks should be undertaken that use retained skills and habits. e.g basic preparation of food, small activity projects, which are worked related and is relevant for the person. (Lifestyle Inventory documentation will provide this information.)
Large dining, sitting and activity areas lacking in comfort and warmth (homeliness).	Residents who have introverted personality traits quickly leave these areas preferring to return to the isolation of their own rooms. The choice of layout with large open areas is often because it is a cheaper building option for owners/investors.	
Aged people who present with maladaptive behaviour as well as having a cognitive disability and who reside in residential care facilities, cause untold stress to other residents, management, registered nurses and personal care assistants. Staff are often not trained or qualified to handle the	These people require specialised psychiatric nursing and psychology intervention to manage the anomalous behaviour. This maladaptive behaviour does not lessen with age and continues relentlessly day-after-day e.g. smearing faeces over self and walls, hiding knives in their clothing, purposely knocking into frail aged residents, stripping down beds, refusing to shower, resentment demonstrated towards another resident with severe dementia, and inappropriate abuse. Four or five people with maladaptive behaviour in a dementia specific living	Aged people with cognitive disabilities, who present with maladaptive behaviour, are not suitably placed in aged care residential care facilities. The proportional time given to each of these people is not monetarily compensated through the present Residential Care Scale funding. Therefore they require specialised psychogeratric nursing facilities attached to large residential care facilities or small separate units attached to smaller residential care facilities.

psychiatric signs and symptoms of these residents. It is a fallacy to believe that people with maladaptive behaviour mellow with age, they are unable to disguise their behaviour. Their anomalous behaviour is unrelenting and uses untold hours of a caregivers mental and physical energy. It is not the cleaning up of faeces or nursing procedures that take time, but the unrelenting, continual cognitive assistance and associated behavioural problems that tax the mental and physical energy of staff members.	area for 13 people, means that a good deal of time and energy will need to be given to them, which of course, they crave. Residential Care Assessors see it as their job to police residential care facility submissions for more funding when residents are due for review. These teams have no contact with residents nor do they have knowledge of the tremendous drain on mental energy that is placed on staff as they try to adequately manage so many aged people who can present with a diverse range of needs, including cognitive disability.	Staff need specialised training to be able to handle these residents, duties which in past years, would have been provided by psychiatric nurses and allied health professionals. Residential care facilities in large cities could be visited by nurses with psychiatric training to carry out showering and dressing, while demonstrating to personal care assistants how best to handle particular residents. The Allen Cognitive Level Screening tool, successfully measures function when the ability to function is restricted by brain pathology. It has the features of a good screening instrument, being brief, with ease of administration, is portable, reliable, sensitive and has specificity. The resulting assessment gives a true indication of how an elderly person is functioning. Cognitive level.mode cannot improve, therefore there is no need for the policing of facilities, and facilities would be correctly compensated for their client population who do have cognitive disability. What is required is advice on how to manage difficult behaviours from a biological perspective and how to improve the environment to assist residents to maintain independent.

FOOD SERVICES

CONCERN	CONSEQUENCE	RECOMMENDATION
Loss of original focus by Meals-on-Wheels because of health regulations. Elderly people who have a cognitive disability will rationalise why they cannot cook and why they can no longer cook. They can read through a recipe with great authority, but they cannot begin 'to do the doing'. The reality is that they are no longer able to plan and organise a meal. Meal time preparation is a highly complex task requiring the person to prepare different food groups to be ready to eat at the same time.	This has created a problem for aged people with cognitive disability. They are not aware of what is in those packets with tightly closed lids. They are neither able to visually see (ACL level 4 - simple vision) nor are they able to manipulate with their fingers the heavy duty aluminium foil that twists over the cardboard lids to keep them in place. An elderly person with minimal to moderate cognitive disability are unable to adequately problem solve how to cook a meal for themselves. They will verbally give logical answers why they are not cooking, but really they can no longer hold images in their working memory as to what to do next.	Aged people living independently need to visually see the food that is delivered to them through the 'Meals on Wheels' program. Many of them are using simple vision to make sense of their environment. Time must be spent daily by those people who deliver meals explaining each component of the meal. If there are no relatives living in the area then checks need to made on the meals not eaten and the unused meals need to be disposed of. The content of a meals must be easily seen through clear plastic lids which are easily opened. Preferably return to the old method of dishing out the meal for the day. It is necessary for elderly people be provided with meals that they can access and preferably given some personal assistance to start the meal.

Hospital hotel services are not catering for aged people with a cognitive disability.	Aged people do not know what is under the heavy metal lid covering their food and they cannot open the little vacuum packets of jam and butter or flip on the aluminium top on small juices. So the patient becomes malnourished and dehydrated.	Provision of different types of foods and finger foods are a essential when the use of eating utensils begins to have no meaning for aged people with cognitive disabilities. Allied health professions including dieticians, speech pathologists and occupational therapists to be invited to form a committee to develop a range of food types, which are matched to the cognitive abilities of aged people. There are many steps in between the two options that are not currently offered for consumption by elderly people in hospitals, hostels and residential care facilities which use the services of frozen food companies.
Owners and managers of frozen food services who supply hospitals and residential care facilities, have little or no knowledge of the differing needs of aged people functioning at the lower cognitive disability levels.modes.	Eating food is a complex task, occupational therapists, speech pathologists, physiotherapists and dieticians would all agree that the dining room becomes a place that is 'More than just eating and drinking'. Some frozen food companies may employ the skills of dieticians and speech pathologists, but owners and managers of such companies are unaware of the services that occupational therapists can provide to enhance their services. Many services provide conventional meals and when the person with cognitive disability can no longer adequately use utensils, the food provided is pureed.	

HOSPITALISATION

CONCERN	CONSEQUENCE	RECOMMENDATION
Hospital health care professionals are not always aware of the continuing need for safety when supervising, assisting, facilitating and/or drilling, prompting or cueing people with cognitive disability.	This lack of safety awareness is most apparent following operations on aged people requiring anaesthetic, who on waking up pull out drips, try to climb over bed rails, or become highly stressed and fearful which may result in abuse and inappropriate behaviour.	Rethink the **current practice** of acute care procedures, which involve verbal or written instructions to be followed by a person in a post acute situation, without knowing if that person is able to functionally process information and then act on it. People to be assessed before an operation by the use of the Allen Cognitive Level Tool must be carefully screened to guarantee a successful outcome. *An illustration is the undertaking of hip replacement operations. The USA experience is that in cases which were assessed using the Allen Cognitive Scale, and which were below a level/mode where they were able to problem solve, there was a 100% failure rate. In other words, to operate using the* ***current practice*** *was both wasteful of funds and resulted in grief not cures.*
Caregivers becoming upset and fearful when their elderly relatives are hospitalised.	Caregivers become highly concerned and agitated knowing the amount of care they must give their relative to keep them safe. They also know they will not receive the same care in hospital.	

REHABILITATION

CONCERN	CONSEQUENCE	RECOMMENDATION
Standard protocols and interventions designed to save time are meant to serve a population of aged people who require 0 - 26% cognitive assistance.	A person with cognitive disability cannot be pushed to learn new ways. The most complicated learning skill for them is unlearning old habits and routines and learning new ways of doing e.g. walking patterns. For many aged people this is impossible to do. You cannot "treat" them to make these biological changes go away.	Traditional treatment protocols will need to be modified to obtain successful results for aged people who have cognitive disability, particularly as they have a slower than normal processing speed and cannot conceptualise the need to adapt to a disability. Rehabilitation requires a therapist to: Assess what a person 'Can Do', which is biologically possible. Ascertain their "Best Ability to Function". Develop management strategies to provide them with a "Just Right Challenge". Advise and educate caregivers. Adapt and make safe the environment, where they will live. The Paradigm Shift is from pushing people to overcome problems *(can't be done as problems are biological)* to helping people use their remaining abilities in the best possible way in the least restrictive environment.
Recent research suggests that traditional approaches to care are ignoring the reality of biological processes, which determine cognitive function levels.	The acute tertiary care hospitals, which have a diseased driven system, as outlined in the World Health Organisation (WHO) - International Statistical Classification of Diseases and Related Health Problems, tenth revision are not suited to run rehabilitation and restorative care.	Once an aged patients' health conditions have stabilised they need to be moved to care facilities that are based on the World Health Organisation (WHO) - International Classification of Functioning Disability and Health (*ICF*)(2001). It can be said that this new classification allows an individual with a disability to be regarded as a person who requires an accommodation or intervention rather than as a person with a condition or impairment (Madden R. 2001).
The provision of rehabilitation equipment for use by aged persons who do not have the cognitive ability to use the equipment safely.	Walking is an executive function of the frontal lobes of the human brain. Giving an aged person a walking frame to use in a high care residential care facility because they are beginning to fall, will not solve the problem. In fact, it will add to the possibility of further falls and injury.	Personal assistance must be given to aged people who have cognitive disability and are no longer able to use adaptive equipment or find their way. This is a continual need to be given daily and when needed. Personal assistance must also be given to aged people who have cognitive disability and are no longer able to problem solve how to use adaptive equipment. The ability to problem solve new situations stops at level.mode 4.6 on the Allen Cognitive Scale.

WORKPLACE AND CAREGIVERS

CONCERN	CONSEQUENCE	RECOMMENDATION
Middle-aged people, who after a long working history, nearly at retirement age, having to cope with aged relatives who are unexpectedly in need of care.	The caregiver needs to take many hours off work, work without pay or sacrifice their full entitlements and/or their job.	Promote greater flexibility and job sharing in the workplace for informal carers of elderly relatives. It is important that carers who are employed are able to continue working, to ensure they are not denied their retirement entitlements.
Insufficient job sharing opportunities for caregivers of elderly people.	To legislate for different job options to allow caregivers of elderly people to continue working, at the hours they can manage.	
Workplaces which give women time off to look after sick children, but are not so inclined to assist workers who have to care for elderly relatives.		
Non-utilisation of workplaces to educate caregivers and others during lunch breaks.	Caregivers need to be educated about the responsibilities associated with their caring role, sometimes the lunchtime break is the only time they can manage away from work and their caring role.	The establishment of short, to the point, training programs giving caregiving advice accompanied with comprehensive handouts. Caregiving training to be established and part funded by government.
Millions of work hours are wasted yearly, as employees of businesses try to explain to aged people with cognitive disability what they want to know.	Unfortunately, the aged people are unable to use the information in a constructive manner e.g. how to use an eftpos machine or how to fill in a new form and why the new form was instigated.	Encourage businesses to assist elderly consumers to learn how to operate electronic digital machines through slow methodical demonstration and hands on assistance. This role could be undertaken by high school students when they have holidays with their service to elderly customers paid by businesses, with the outcome of both age groups learning from each other.
The technological digital divide has also created a dedicated workforce of highly skilled young Australians who spend anything up to 60 hours a week working.	The workplace is driven by client/consumer demands, managements expectations and competitive goals. Companies are not concerned nor do they recognise the after-hours responsibilities of these young people. Their parents, who strived so hard to give them a tertiary education rarely see them, and if they do, it is for flying visits as their adult children are hard pressed for time. Once more this whole ethos of living work, means young people have not developed the understanding to cope with sick and ailing grandparents or when there is a need for their parents to lean on them for support.	The importance of family life needs to be re-installed into the values of both young people and the companies that employ them. Life is not all work, but part of a continuum along life's path. People need to be informed of and understand the importance of the roles they must play in the family unit, which in the long run is a vital part of life's experience and is a source of learning that must not be discarded.
Retirement age threshold was established by Chancellor Bismark in 1889, it has now become an	The word 'retirement' is a direct contradiction to brain enrichment and has become a highly volitile word used in many commerical arenas to	A belief strongly held by the general public is the need to retire at 65 years of age. It is incredible that this magical belief

unshakeable belief that 65 is the natural age that "older" people should stop being productive. At the time this pensionable age was establed the average life expectancy was only 45. The fact today is that nearly 70% of people over 65 years are reasonably independent, only requiring someone else to do heavy manual work in and around the home.	promote products. This word also means it is time to 'give up' for many people with cognitive disability, who are functioning in the minimal level.modes 5.0 to 5.8. These people do not have the creativity, initative or knowhow to plan everyday life tasks or look for other work alternative. Retirement by definition reinforces disengagement and passivity.	established so long ago is still held. The need is to change the way people work. People can go on working beyond 65 years, but require flexible times and it must be acknowledged they will generally be slower in their output and taking in new information. Work should be broken up into different phases over a person's life. Once people are no longer able to do heavy work and keep working at a hard pace, then there needs to be alternative opportunities for them. Employment in more sedentary jobs, or to hold a mainstream employment position job sharing with another older person.
The lifting of compulsory retirement has resulted in diminished performance appraisals, as the only option to remove aged people with cognitive disability from their job.	This is sole destroying for many elderly works who have no concept that they are no longer able to do the work they have always done. Once more there is a total lack of insight into their cognitive disability. It is extremely dangerous for elderly people who work in a highly skilled professional role and have no insight. e.g. barrister.	Following a major medical set back elderly workers may need to be assessed for cognitive ability and strategies developed for them to either continue work or encouraged to find less taxing roles in the community.

TECHNOLOGY

CONCERN	CONSEQUENCE	RECOMMENDATION
Inadequate opportunity for ageing people to access technology training Australia-wide.	This nation cannot afford to allow people to choose whether they will learn or not learn new technology skills, which are a perfect medium to engage in new learning, whilst at the same time doing an activity. As the digital divide widens there will soon be many aged people who will not be able to access services, due to the cost to them of not being able to use old service methods e.g. banking passbooks	Establish learning centres for ageing people in schools, during night sessions or holiday periods, where the teaching of technology has already been established. This is a necessary to maintain mental fitness. Provide additional funding to senior citizen groups to assist them to teach others the basic principles of technology.
Smaller and smaller digital technology equipment is inappropriate for use by elderly people with disability which limits their ability to feel and manipulate smaller buttons and keys.	'Smaller and smaller' excludes many elderly people from accessing technology. People with cognitive disability are not able to manipulate small buttons.	There is a requirement to make sure that not all technological devices become so small and complicated that nearly 20% of the population will not be able to use them.
No money allocated to assist caregivers to learn new technology so they can participate in a meaningful activity whilst the person they are caring for is resting.	Caregivers should have the opportunity to learn new technology in their homes. It is something they could do to keep themselves attune with societal movement. The consequences of not having this opportunity would be detrimental to the advancement of this nation as a group of well informed people.	Time allocated and technological equipment loaned or given to people to use whilst they are fulfilling their caring role. Formal caregivers or care assistants to instruct them on the basics of technology during their daily or weekly visits.

TRANSPORT OPTIONS

CONCERN	CONSEQUENCE	RECOMMENDATION
Transport is a major contributing factor in the growing isolation experienced by aged people. Even though schemes have been successfully established many elderly passangers find reasons why they cannot use the transport system. What has not been documented is why they do not utilise transport options once they are established.	Many of the elderly people who require transport cannot problem solve how to be ready on time to be picked up. Many have a fear of the unknown and are so frightened they cannot envisage how they can use a new service. They will give plausible reasons and excuses to their relatives and formal caregivers, but in reality they cannot do something new unless there is someone they can trust who will go with them.	Caregivers or a trusted friend to travel with them, until the aged person is able to demonstrate that they can be taken without the support of someone else.
Driving a privately owned motor vehicle. Many aged people with cognitive disability are driving. They are using well learnt skills and habits to be able to do this complicated task.	They are totally unaware of the inability to judge road conditions and their increased risk for accidents, with potentially serious consequences for themselves and others.	Competency driving a motor vehicle requires the ability to attend to environmental cues and having the ability to respond quickly to risk situations. There is also the need to exhibit responsibility and exhibit a duty of care to self and others. These abilities are not available to people who are functioning at level.mode 5.4 and below.

SECURITY SYSTEMS AND SECURITY

CONCERN	CONSEQUENCE	RECOMMENDATION
Some elderly people with cognitive disabilities lock themselves inside their homes because of their vulnerability to, and perceived fear of the threat of 'home invasion'. They can also have a paranoid belief that people are going to take their belongings and/or have taken them.	They do not have the ability to judge weather conditions, e.g. heat, nor the need for the flow through of air. They lock themselves inside their homes and because of their inability to manipulate objects successfully, caused by their cognitive disability, are unable to quickly open locked doors in the event that disaster threatens. They do not have the cognitive ability to properly judge threats to their safety and security.	When they become a danger to themselves and others, it is time for these people to be encouraged to move to a safe and secure environment within a residential care facility. They cannot be reasoned with nor can they change the way they live their lives.
Personal care alarms can not be used when a person has moderate cognitive disability. The personal care alarm must be within their visual range, otherwise it does not exist for them. Many such alarms are given to aged people by employees of government agencies who have no understanding of the aged person's inability to use the alarm safely.	The personal alarm system is ineffective for people living alone or living in retirement villages and residential care facilities, when that person's cognitive level.mode is 4.2 or below. These people are at risk, they are unable to learn to use the alarm because it requires them to learn something new. Also, because it is out of sight it does not exist. When in need they will also ring their closest relative, the emergency number 000 does not exist for them when a crisis does occur.	People functioning at this level.mode and below require 24 hour supervision and safety measures need to be put in place to protect them from injury and harm.

GOVERNMENT FUNDED SERVICES TO PEOPLE WITH DISABILITY

CONCERN	CONSEQUENCE	RECOMMENDATION
Telstra no longer sends a technician to the home of an aged person who requires a special device that has been recommended for their disability, new equipment arrives by courier well sealed.	This equipment will often stay this way until a younger family member is available to set up the telephone designed for a specific physical disability. There is no thought that an elderly person may not have either the physical or cognitive ability to assemble the piece of equipment, read how to use the machine and then successfully use it.	Speech therapists need to be employed by Telstra, and other such companies that provide adaptive equipment, to assess the aged person's ability to use the equipment and to then to assist with the setting up of the equipment. With return visits to ensure compliance.
Department of Veteran Affairs (DVA) policy allows assessment of home modifications and supplies adaptive equipment for physical disabilities, but does not provide for the cognitive assessment of its aged veterans to determine whether they have the cognitive ability to both attend to what they are being told and demonstrate whether or not they can use equipment safely. One visit to a veterans home is normal procedure, with no follow-up visit approved.	Therapists and nurses do not have the authority to assess that the equipment is being used safely or indeed is being used at all. Millions of dollars worth of assistive and adaptive equipment is handed out weekly **on the dangerous assumption** that the veteran can **safely** use adaptive equipment.	The Allen Cognitive Level Screening Tool needs to be administered by therapists **before** adaptive equipment is supplied to veterans.
As adaptive equipment can not be safely or effectively use by many aged people with cognitive disability, this equipment stays unused.	Though the person needs to use a piece of adaptive equipment, they are not able to either find the piece of equipment, or they do not remember they have it, or they discard it. The equipment cannot be used by a person with cognitive disability who is functioning below level.mode 4.2. They are not aware they should wear their glasses, hearing aids or use personal alarm systems, walking devices or other expensive adaptive equipment. Therefore, millions of dollars are wasted when these sensory devices and adaptive equipments are ordered by health professionals who are unaware of the limitations imposed by cognitive disability.	Trained therapists need to assess the cognitive level.mode of each aged person before new sensory devices and adaptive equipment are ordered or re-ordered. Once a person is biologically unable to use equipment, this equipment is wasted when provided at a huge cost to the nation.

Scientific Evidence

The entire nervous system of the human brain is the embodiment of all the lived sensorimotor experiences, which generate and stimulate neural structures that interact and respond in complex ways with the whole brain structure. As neural connections are used and reused they are strengthened. The connections that aren't used dissolve and disappear. The reality we experience is the complex whole generated by this plastic structure and its activity (Weldon Jones, 2002).

Though the dynamic plasticity in the morphology of the brain slows down as we age, it does not stop, but it can be disrupted. How the human brain functions is recorded by measurements, either of its electrochemical activities *by magnetic resonance imaging (MRI)* or of the bodily behaviours *(such as Allen Cognitive Levels)* that by intention represent its internal states (Walter Freeman; 2000). The disruption in re-living sensorimotor experiences can be caused by external head injury due to falls and motor vehicle accidents and internal brain injury due to chemical substances, medication side effects, prolonged surgery (cardiothoracic surgery), neurological damage and an aged associated decline. These are only some of the causes of cognitive impairment.

One consequence of the aforegoing is: **the doing is the learning**. The whole sensorimotor experience *(motion, movement, touch, seeing, hearing, smelling, tasting*) co-forms the neural response. The neural response then co-forms the sensorimotor experience. If the **"learning"** activity is different from the **"doing"** activity, two substantially different neural activities are involved and the crossover benefit is limited (Weldon Jones, 2002). To be able to lean new information the whole brain is required to fire up with neural activity and then stay that way until the new activity is learnt and becomes a habit. The brain builds its processing pathways by turning a lifetime's succession of small mental exercises into a thick strata of habits in the basal ganglia (Raichle, 1998; Graybiel, 1998; Karni, 2001). According to Graybiel, much of normal behaviour depends on learning how to perform entire action sequences so smoothly that people carry them out almost without conscious effort. This type of learning, known as procedural or habit learning, is critical for maximizing cognitive function. People depend on habits to free them to think and plan and to react to novel events in the environment. Clinical and experimental evidence suggests that the ability to acquire habits depends on the basal ganglia, the deep forebrain structures that are interconnected with the frontal cortex in a series of loop circuits.

It is the thick strata of habits, that make up the routines that aged people with cognitive disability are able to use on a day-to-day basis, unless nothing out of the ordinary occurs which requires instant problem solving. With any degree of cognitive impairment, either acute or chronic, procedural memory is often preserved, whilst new learning is compromised or absent.

Consequences

There is a greater-than-average risk of accident and injury for aged people with cognitive disabilities. Their ability to think and process sensation is impaired and basic needs are not communicated due to inadequate attention to the environment, unnoticed biological cues and unknown secondary effects. They have little or no insight into their cognitive deficits and can rationalize why they cannot change and perform a task in a different way. This means they will blame the tools they are working with, say that they were told incorrectly or that they were not effectively or adequately shown how to do it in the first place. They can become angry and frustrated with others who try to assist them, rejecting or grudgingly accepting it may be necessary to seek assistance, or consider other alternatives.

Motivation to 'do' an activity will not increase an aged person's ability once they have a cognitive disability.

If an elderly person does require hospitalization and rehabilitation for a disability they may, in many cases, not be able to relearn or safely adapt to using rehabilitation aids e.g. a walking frame. **'A new disability requires new learning (Olin & Stanley, 2000)'**. New learning requires attention to sensory stimuli processing and long-term retention of sensory information. Thus traditional treatment protocols will need to be reconsidered to obtain successful results for aged people who have a cognitive disability. The environment is modified to trigger the safe completion of routines and rituals learnt over a life time, therefore allowing aged people to use 'the way they have always done a particular activity'. Logically, one can assume that if a proportion of aged people are biologically unable to notice and process information, then they cannot use that information to influence their behaviour. Functional performance beyond one's cognitive level cannot be expected in novel or non-routine situations. If caregivers expect functional performance beyond what is biologically realistic, then performance failures can be anticipated, including self-neglect, falls and injuries, 'fight or flight' behaviours, verbal aggression and medical non-compliance.

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