CONFIDENTIAL

NEUROPSYCHOLOGICAL ASSESSMENT

Name: **Lynette Croll (known as Nette)**

Age: 73 years (D of B 21 /12 / 1930)

Date of Assessment: 19th February,2004

Place of Assessment: at her home , 2 Fleet Street, Bunyip

Assessment was performed at the request of Mrs Croll and her son Trevor to identify any neuropsychological changes as a result of a stroke which occurred on 11/11/2003 and for which Mrs Croll was hospitalised at the Dandenong Hospital for two months. I understand that during this time, there was concern expressed by her three daughters about her competence to manage her affairs. I believe they have made an application to the VCAT for a Guardianship Order by which they can manage her affairs which, I understand, includes the estate of her late husband, Mr Harry Croll who died in June 2003 leaving a significant amount of assets to Mrs Croll.

Mrs Croll does not consider that she is incompetent to manage her own affairs or to take responsibility for decisions concerning her own best interests. She does acknowledge that she is considerably weaker and less mobile since the stroke and has only minimal function in her left arm . She also describes some difficulties with visual perception and agrees with the advice from the Dandenong hospital that she should not resume driving at the present. She is continuing to take medication for hypertension and to prevent further clotting (Warfarin) and this is monitored by her doctor. She also reports that she relies a great deal on her eldest son, Trevor, for assistance with tasks such as driving and shopping and care of the garden and has agreed to him supervising her medication. I understand that Trevor returned to Victoria from his home in Brisbane at the time his father was terminally ill in early 2003 and has continued to live in the family home since then. He has continued to manage his own business in Brisbane as well as attend to some of the affairs and property of his late father. I understand that he and Mrs Croll share the household chores and she is not dependant on his being there but enjoys his company and agrees that he is a better cook than she.

EDUCATION and OCCUPATIONAL BACKGROUND

Mrs Croll grew up in Deepdene and completed three years of secondary school gaining her Intermediate certificate. She considers she was a good student and liked all aspects of school . In her final year she took business studies which enabled her to get an office job which she enjoyed and considered that she managed well. When she was 16 years her father achieved a lifelong ambition and went farming in South Gippsland , insisting his daughters accompany the family.
She remained on the family farm till she married Harry Croll , a returned soldier. Although she did not work outside the family after her marriage , she describes a varied and hard working life raising five children and participating in the family businesses of dairy farming in Bunyip, buying and running a hotel in Nar Nar Goon and establishing a racing stable to breed and race thoroughbred horses.
Mrs Croll considers that although Harry was seen as “the head of the businesses”, she was very involved and did most of the financial management.

Her description of all these issues was clear, logical and with a consistent chronology.

PRESENTATION

Mrs Croll was alert and co-operative although rather anxious initially about the prospect of the assessment She was able to be reassured about the purposes and the process and seemed to be able to relax and deal with a session of nearly three hours of interview, testing and discussion with only a few rest breaks. I noted that she was efficient in moving around the house, preparing morning tea and finding things (such as her medications to show me). She seemed to be aware of the home modifications and used them well (such as the hand rail and safety kettle). Vision is normal although she uses glasses to read and can decipher 8 point print with these. Colour vision is normal and hearing without difficulties.

Concentration was excellent although it was apparent by the end of the session she was quite fatigued and slowed in her responses. Distractibility was not an issue either from external events or internal trains of thought although, as she herself admits, she is" a bit of a talker" but she accepted well being brought back to task . Time estimation was reliable and she was orientated to all aspects of time , place and current events although she was one day wrong with the date. She uses a calendar for appointments and a filing system for bills to pay and bills paid , but considers she has never had a need for shopping lists.

Mood was rather flat but appropriate. She denies being depressed pointing to her strong Christian faith as a comfort when grieving over the loss of her husband and a reassurance when confronted by the uncertainties of her health. She considers she is a positive person who copes well with adversity. She is fairly angry and distressed by the treatment she describes she has encountered from her daughters in recent months I understand that she was able to cope well with her husband's tendencies to dominate and insist on being seen to be "powerful" while maintaining her own autonomy and ensuring that the children were all treated fairly.

NEUROPSYCHOLOGICAL TESTS GIVEN:

Language and Lifelong Intellectual Abilities
National Adult Reading test; Boston Naming test; Items from the Spreen Benton aphasia screening test
Tests of Memory and Attention
Wechsler Memory Scale 3
Flexibility of Thinking
Sorting test with Three Concepts; Similarities (WAIS 3)
New Learning
Austin Maze Learning test; Verbal Learning test
Regulation of Behaviour
Stroop test (Selective inhibition) Verbal Fluency test (Initiation and maintenance of responses) Trail Making test (Maintenance of an alternating principle)

Problem Solving and Organisation
Complex Figure of Rey test; Subtests of the Wechsler Adult Intelligence Scale (WAIS 3)

Objective Assessment of Mood and Affect

IPAT Depression Inventory:
Score out of 80 = 7
This is more than two standard deviations below the cutoff point for clinical depression of 30/80 and reinforces Mrs Croll's own view that she is a very positive person. Discussing some of the items with her , I considered that the profile although more positive than for most newly widowed women with health difficulties, was not indicative of any for of euphoria or undue emotional denial of reality. Self esteem is positive and resilient and there is no evidence of guilt, anger, doubts about abilities or recriminations. Her respect for others seems to be equally positive, even within the current family difficulties.("she is my daughter still" she remarked when describing some of the behaviour of one of her daughters which could well be considered as criminal)

Insight is realistic as I understand her situation. She is certainly aware of her limitations and seems prepared to accept assistance and help from outside and within the family
She acknowledges none of the somatic aspects of depression such as poorer sleep, diminished appetite or morbid ruminations. She reports progressive fatigue during the day but this is a reflections of her recovering stamina from the stroke..

.Thus it seems very unlikely that Mrs Croll is at risk from any overt or covert depression or unmanageable anxiety. Nor are her few cognitive difficulties likely to be a reflection of an affective disorder.

SUMMARY of TEST RESULTS and OPINION

Language and Longstanding intellectual abilities are well within normal limits with no evidence of new impairment. There is some degree of slowing in the spontaneity of word finding as noted in the Boston naming test but this does not constitute a problem. There were no abnormalities noted in the grammatic, syntactic or semantic aspects of either expressive or receptive language. Estimation of lifelong intellectual abilities (from performance on the NART) would put Mrs Croll in the range of above average for the population. There were no difficulties noted in reading, writing spontaneously or to dictation or the using conventional notation with numbers..

Memory and Attention is remarkably competent with no evidence of any impairment in either verbal or visual memory. Immediate memory is able to register and manipulate information in store. Short term memory is able to register, store and retrieve large amounts of information with no instances of confusion or confabulation. Estimation of amount recalled was reliable. Thus Mrs Croll will be a reliable witness even when given a lot of material to remember. The intact nature of her memory is seen in the following scores on the WMS 3:

Logical Memory	14/19
Delayed Logical Memory	11/19
Facial Recognition	10/19
Family Pictures (memory for detail)	12/19
Digit Span	11/19

These are standardised, age corrected scores with a population average of 10/19 and a normal range from 8 to 12/19. From the background described above it would be expected that Mrs Croll would have scored at least at the average to slightly above average level thus confirming that her recent CVA has not impacted on memory reliability

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New Learning is a little slowed compared to expectations , but she is able to benefit from repeated experience in the normal way. This was seen in the complex Austin Maze Learning test in which she was able to reduce error scores from 18 in 131 seconds in trial 1 to 8 errors in 72 seconds in trial 5. With the application of some basic teaching strategies this was reduced to 2 errors in 43 seconds. After a delay of one hour she was able to retain most of the experience with a score of 7 errors in 72 seconds suggesting that when she encounters a new system, new equipment or the need for a new skill , she will, given adequate time be able to master it. This will be easier if she is assisted with simple teaching strategies to make the mastery more reliable.
New verbal learning was much more efficient suggesting that there has been a minimal impact of the stroke on new learning of visuospatial information, but this is still well within acceptable limits,

Regulation of Behaviour is under fair voluntary control and with no evidence of impulsivity or adynamia which would constitute a problem to safe and appropriate independent living.
She showed a good ability to deal with the conflicting demands of the Stroop Test although her performance was a little slower than expected:

Time to name coloured xxx's	= 50 seconds	Normal	30-40
Time to name congruent colours	= 22 seconds		20-30
Time to name incongruent colours	= 139 seconds		60-80
Errors unrecognised=0 Recognised =3			<3 of either

Her spontaneity and capacity to maintain responses was acceptable albeit slower than usual as seen in the Verbal Fluency Test:

Mean words per letter per minute = 7	Normal	=9-12
Errors = 2 (both recognised)		=0-2
Words by category = 20		=16-20

When required to maintain a complex alternating response (between a numeric and alphabetic principle in the Trail making test) she performed well recognising the one error she did make and revising her efforts to get the correct solution. The difficulty she experienced on this task reflects the impact of her stroke on her visuospatial abilities and confirms that, as long as she is allowed sufficient time, she can adapt and deal with complex situations..

Flexibility of Thinking is well with normal limits showing a quick and confident capacity to see several options in the one situation simultaneously and switching between them according to subtle or indirect feedback. This was noted in the speed and efficiency in which she identified the three options of colour, shape and number in the Sorting Test and used each with no tendency to confusion or perseveration back to an earlier idea. Performance on the Similarities test (WAIS 3) was equally good suggesting that she is able to reason in the abstract, make generalisations and predictions- all necessary in the making of appropriate decisions and recognising the implications of actions and choices.

Problem Solving and Organisation is with some slowing and minimal difficulties when confronted with complex visuospatial material but normal when

operating with familiar verbal material. She took a longer time than usual to copy the complex figure of Rey and made several initial errors in her copy. However, she was able to recognise these spontaneously and slowly but competently correct them gaining a score of 28/36 which is well within the acceptable range. When required to recognise anomalies and errors in everyday scenes (Picture Completion –WAIS 3) she was quite competent using her verbal reasoning skills to deal with the more difficult items. She was also able to deal with numerical reasoning appropriately scoring 11/19 for Arithmetic. This subtest was given at the end of the session when it was apparent that Mrs Croll was very fatigued and finding it difficult to maintain concentration. It was interesting to note that her insight into this was realistic and we both agreed that she would not tackle complex numerical or financial tasks after a long session of other challenging cognitive activity. Her idea that she would do such things in the morning when she was fresh was insightful.

CONCLUSION

These results suggest that Mrs Croll is showing no new difficulties or impairments in the cognitive abilities associated with verbal reasoning, problem solving or decision making. Memory and attention abilities are intact and competent albeit a little slowed. I suspect that this will improve with time as are her other physical problems with slowing. She has some minimal difficulties with visuospatial perception which reduce the efficiency of some of the executive functions such as new learning and regulation of behaviour but not to the point when it could be considered that she has a disability or that the problems are unable to be managed or would constitute an impediment to safe independent functioning. She has reasonable insight into her limitations and, in the practical situation when confronted with the visuospatial difficulties, she is able to compensate well using verbal reasoning, analysis and compensatory strategies. As we both discussed, as long as she is not required to return to the days of backing the horse float or balancing the hotel till at midnight after a full day's work, she will be able to continue to manage to take responsibility for her self appropriately and safely.

As it is still very early after the stroke (three months) it could be expected that continuing improvement in her perceptual problems will occur over the next 6 to 9 months. As her general stamina and resilience return, I expect that the slowing noted with some activities may well also improve.

RECOMMENDATIONS

Mrs Croll would benefit from

- Recognition of her cognitive competence to manage her affairs and make her own decisions. It would be expected that she will continue to consult her familiar experts (solicitors and accountant) for advice in legal and financial matters.
- Encouragement to continue to live in her own home while accessing appropriate community support to assist with household and garden maintenance as well as community medical services in the management of her health issues
- Similar encouragement to maintain community social networks to minimise social isolation. As the last year of her life has been significantly disrupted by the death of her husband and her own illness and prolonged hospitalisation , it may take some time and require support to re establish some of her social networks and activities (transport may be an issue here and investigation of options may be important)

- The establishment of more formal systems for memory cuing and planning and organisation of household activities (for example the use of a large diary and whiteboard in a prominent place) may make it easier for Mrs Croll to remember forwards and recall backwards more efficiently and thus increase her confidence that she does have everything under control
- I do not consider that she should attempt to return to driving until she has an on road driving assessment with a qualified Occupational Therapist. Although there are no cognitive difficulties which would prevent safe driving, I am not sure of the impact of her minimal but perhaps significant perceptual alterations.
- Careful teaching of new skills, new systems or new equipment rather than leave her , as in the past, to "pick it up as she goes along". She will find it much easier and more efficient to seek out formal instruction if there is something new to master. I consider she is quite "teachable"
- Psychosocial support (perhaps professional if she choses it) to assist her to cope with the current family disputes and disagreements . Mrs Croll acknowledges the distress the current behaviour of some of her children is causing her and yet, as she comments, she wants to maintain relationships with her grandchildren and extended family. Perhaps in the future there could be some form of family mediation considered,.

Reassessment in eighteen two years is warranted to look for improvement in perceptual abilities or if there are ongoing concerns

Feedback about performance has been given but may need to be reiterated.
At the end of the session I reassured Mrs Croll that I considered she was "not requiring anybody to manage her life for her" and reiterated my suggestion that, if she wanted to return to driving, she should seek out professional advice.

This report to:
Lynette and Trevor Croll, 2 Fleet Street Bunyip for distribution to the VCAT hearing and to her General Practitioner and Neurologist

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