Management of ARBD

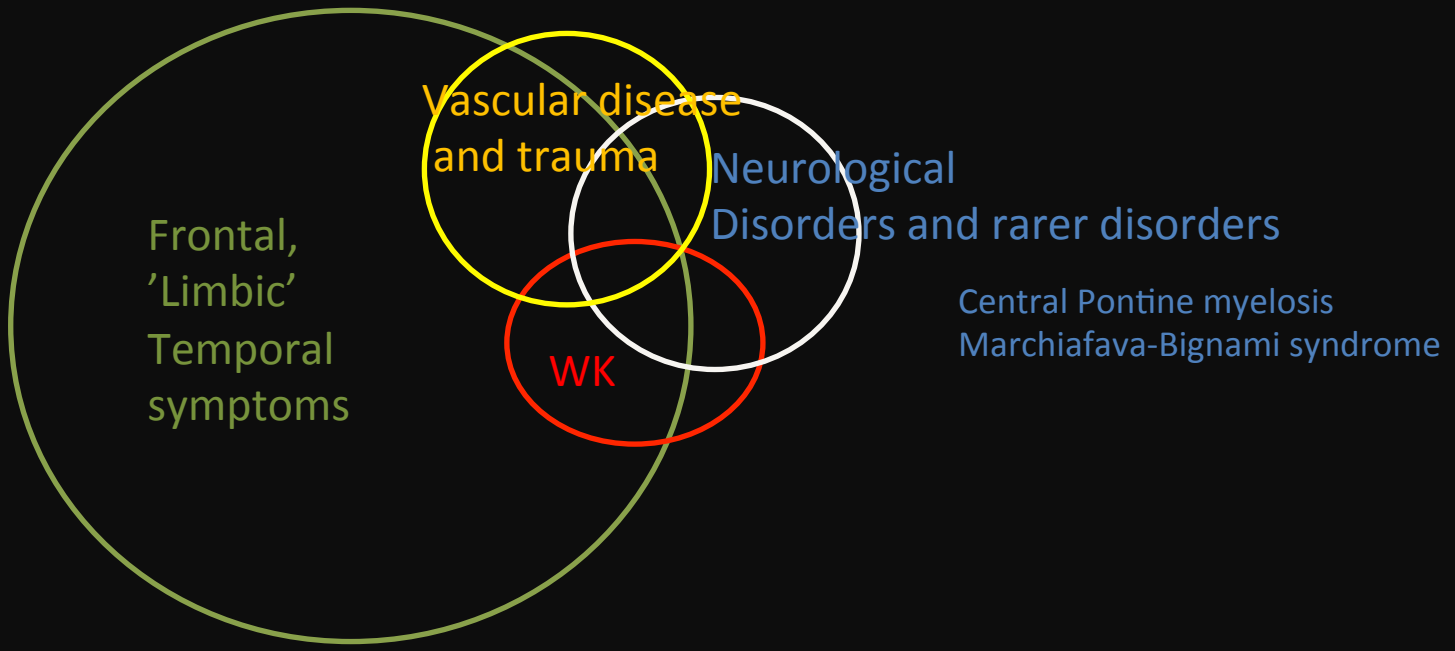
Breaking the Cycle

Prevalence
1980-90s

Post mortem studies:

- 40,000 post mortem studies from community: Europe, Australia and USA
- Characteristics of WE in 0.5~1.5 % of patients of the general population at post mortem[1,2]
- Looking at post mortems of people clinically diagnosed as alcohol misusers: 12.5% have changes of classical of WE,[3]
  - Increasing to 30% if cerebellar damage is included[3]
- Only 18% of patients diagnosed during their life time (PM studies)[3]

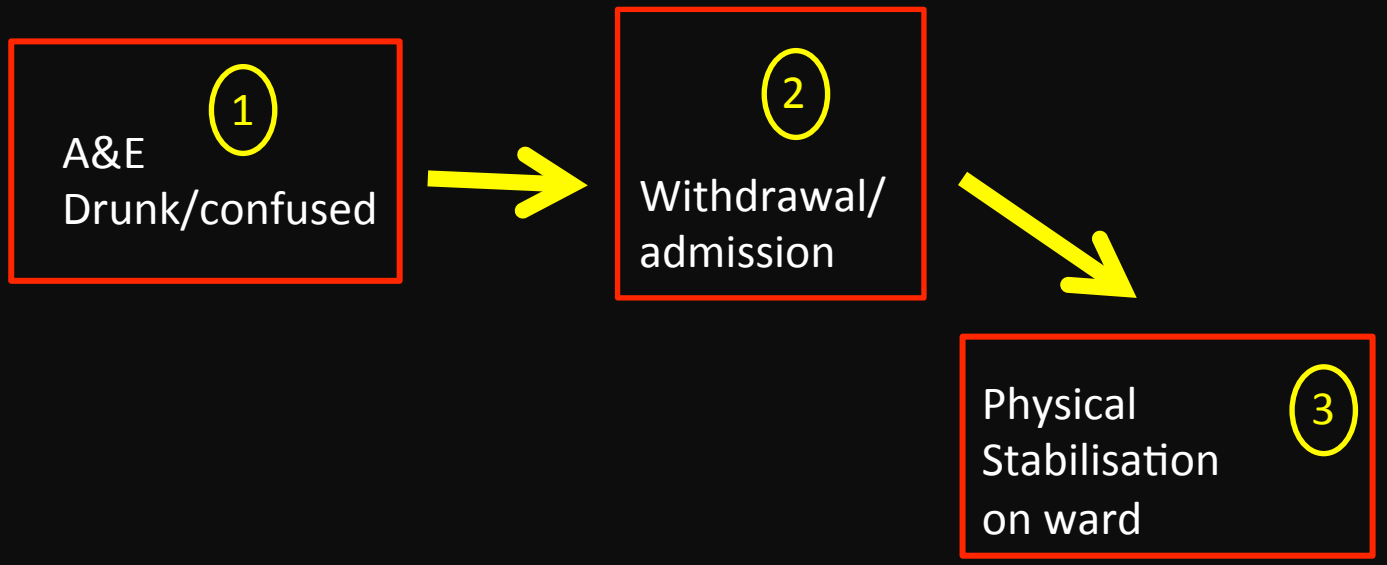
ALCOHOL RELATED BRAIN DAMAGE



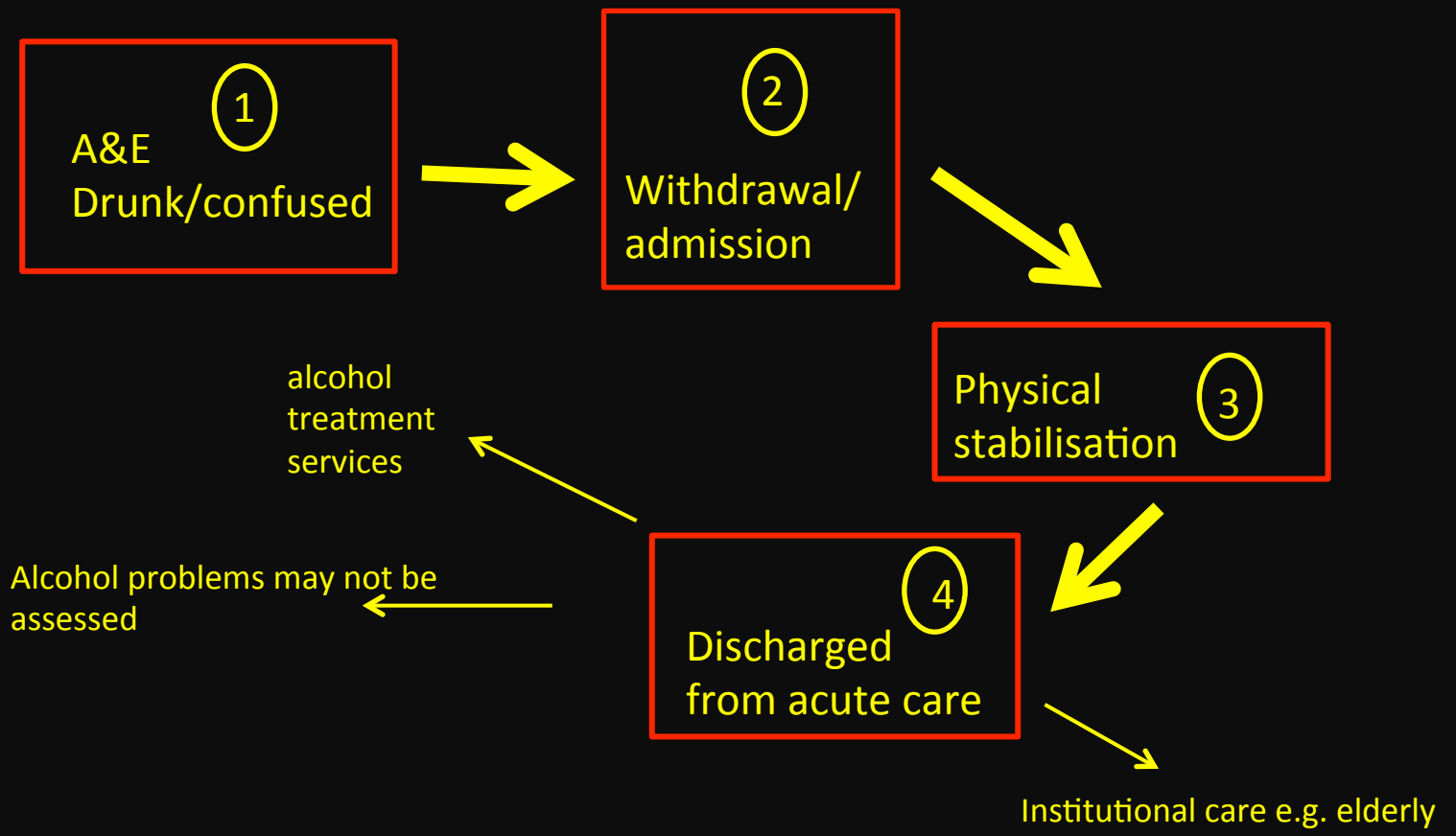
The problem:
A health perspective

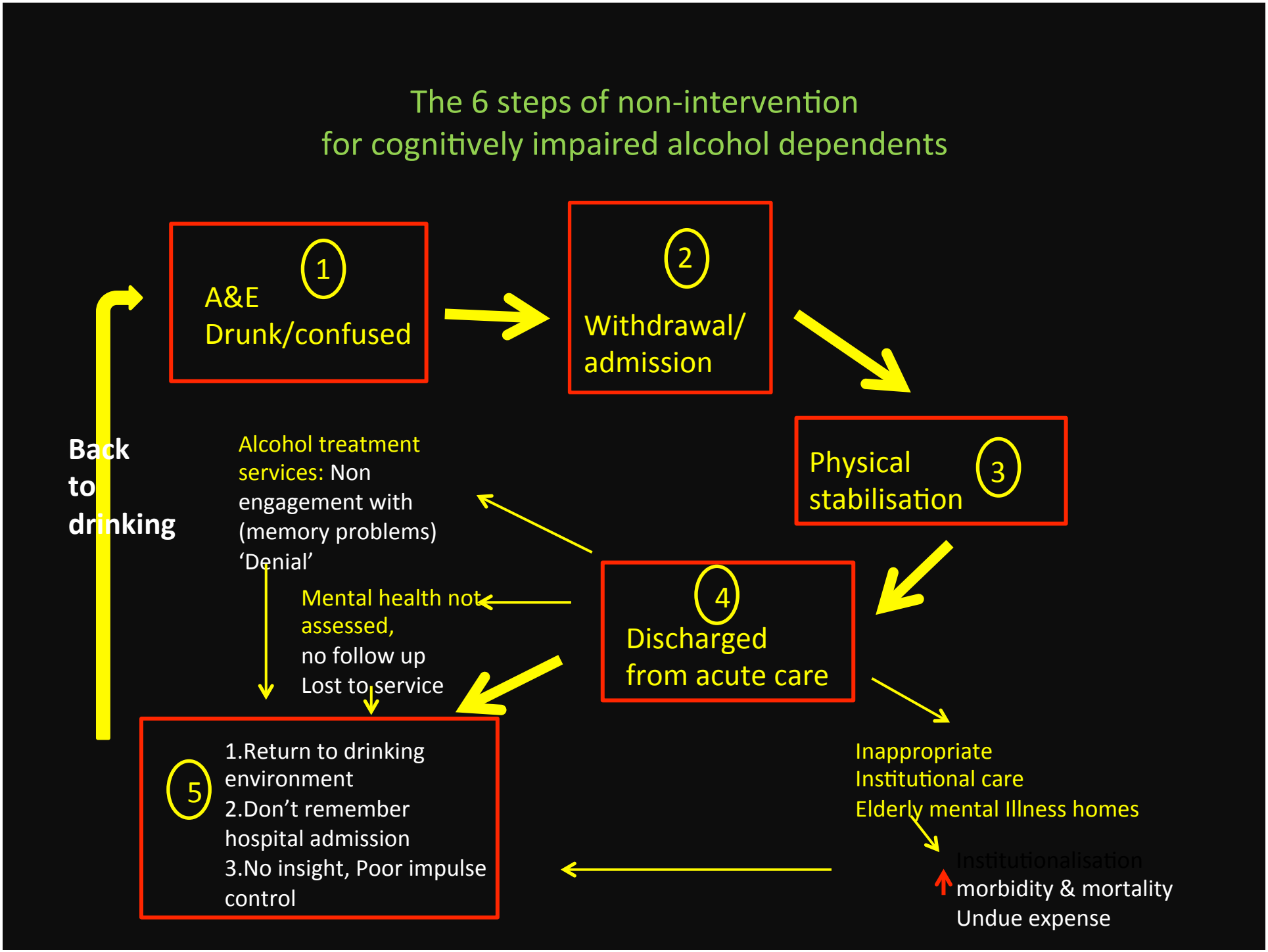
- Consumption: female: 30 units, male: 50 units a week for five or more years [1] (this will vary dependent on nutritional status)
- What we are considering:
  - 45 to early 60s:
  - Very confused and often disruptive
  - Multiple hospital admissions
  - Multiple GP contacts
  - Social and family breakup
  - On acute medical wards (often gastro intestinal/liver)

The 6 steps of non-intervention for severely cognitively impaired alcohol dependents



The 6 steps of non-intervention for cognitively impaired alcohol dependents (<65)




The 6 steps of non-intervention
for cognitively impaired alcohol dependents
1
A&E
Drunk/confused
2
Withdrawal/
admission
Physical
stabilisation
3
4
Discharged
from acute care
5
1.Return to drinking environment
2.Don't remember hospital admission
3.No insight, Poor impulse control
Back to drinking
Alcohol treatment services: Non engagement with (memory problems) 'Denial'
Mental health not assessed,
no follow up
Lost to service
Inappropriate
Institutional care
Elderly mental Illness homes
Institutionalisation
morbidity & mortality
Undue expense

Metacogntion

Understanding the patient's understanding

Looking through their eyes

Cognitive effects of heavy long term drinking and associated vitamin deficiencies

Memory:

Short term and long term memory problems[1,2,] false memories[3,4] and suggestibility

Frontal lobe and reasoning

- Difficulty in concentration[5] and the ability to be able to change from one stream of thought to another with normal degrees of flexibility[8]
- Problems in reasoning [6] and problem solving difficulties [7]
- Increased impulsivity and less awareness of implications of actions[10]
- Reduced planning and organizing arrangements [10,11]
- Breakdown of interpersonal relationships [12]

Short term memory problems
verbatim interview of a patient that has been through treatment

Cant remember her last drink: denied she had a problem

Q: So what I would like to ask you is a little bit about your memories of the last three or four years

A: Because I forgot what was going on , I turned to John thinking he knows the answer and he understood me. He understood what I was going through and he would suggest something, that's how I managed.

Q: Do you remember the issue with alcohol those years ago.

A. I remember drinking. But even though he told me I was drinking too much, I could not remember drinking the previous time and I was sure I was not, even though he told me, everybody told me. I thought the last drink was the night before and I was having after effects. I don't remember doing it on the actual day.

Q. Does that mean you don't remember the drink before the one that you were drinking at the time? [correct] Did that make you think you were drinking less than you were because you could not remember it?

A. Yes, I was thinking I had it the night before [um] and the effects of it made me go blank

- (Consent to use as teaching aid provided by patient and carer)

Understanding Confabulation on the context of memory problems

- A falsification of memory occurring in clear consciousness, in association with organically derived amnesia[1].
  - Momentary / Contextual type
    - Brief in content , Reference to recent past, Is usually provoked
  - Spontaneous/Fantastic type:
    - Juxtaposition of events
    - Far fetched adventures, grandiose in theme, spontaneous (probably frontal in nature)

Momentary/contextual confabulation

- An inpatient gentleman, liver disease, recurrent admissions with withdrawal.
- Has been on the ward for three weeks
- Anterograde and retrograde memory problems and evidence of early dysexecutive syndrome (frontal lobe difficulties)
- Seen on ward just after visiting time is over

Momentary/contextual type

typical example

Q. How are you today?
A. Fine.
Q. I hope I did not interrupt any visitors?
A. Its OK; my wife has just left.
Q. How long have you been married?
A. Many years.
Q. Are you still living with her?
A: Yes
Q. Are you going to live with her when you are discharged ?
A. Of course.
Q Are you going back to your own flat when you leave hospital?
A Yes
Q You will be living alone then for a while?
A Yes
Q Will it be Ok if I come and visit you?
A Yes

Lives alone and has done for many years
Been divorced for many years, no 'partner'
No contact with wife who apparently lives in different part of UK
Had no visitors at visiting time

Leading the patient

A 52 year old women with severe ARBD in a nursing home:

Assessment of her ability to decide where to live

Leading the patient

A lady with ARBD in a nursing home

Q. Do you have any plans?

A. Every day is different

Q. Do you like it here?

A. Yeah

Q. Are you happy staying here?

A. Yeah

Q. Do you know what sort of place this is?

A. Its like a home…sleep, eat watch TV…

Q. Do you understand that this is a nursing home?

A. Yes

Q. Do you want to live in a nursing home?

A. Yes

I have changed personal details in this case

Leading the patient

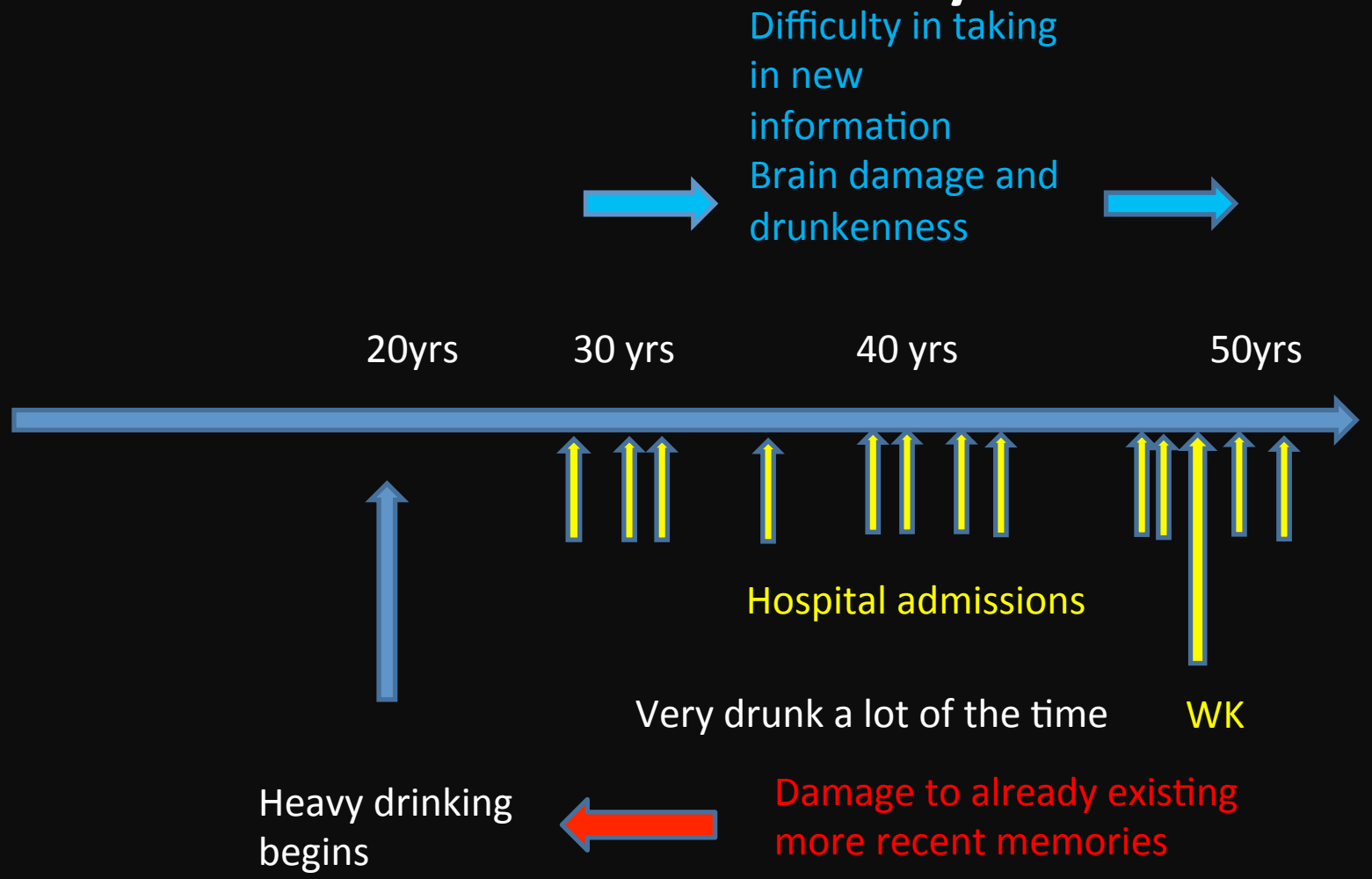
Q. Have you lived here all your life?
A. Yes
Q. Do you remember living in any other place?
A. No
Q. Do you remember Bower street?
A. Sometimes
Q. Do you want to live in Bower street, where you used to live?
A. Yes

I have changed personal details in this case

Spontaneous confabulations and long term memory

- Retrograde episodic amnesia
  - Can go back 25 years

Architecture of memory (personal interpretation)



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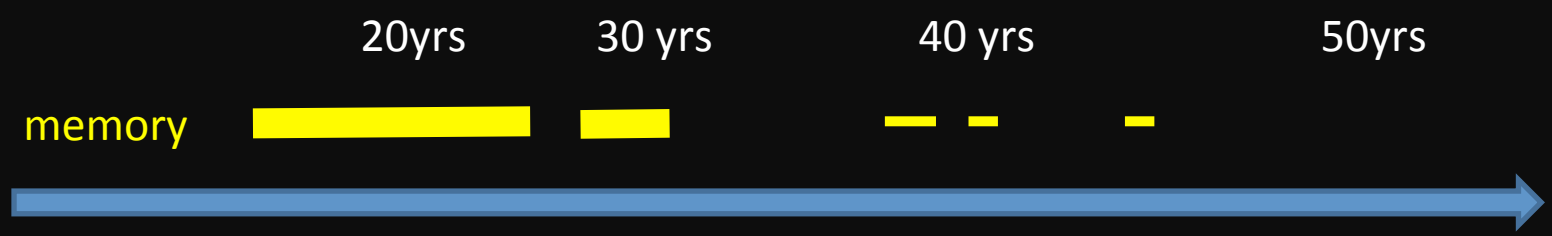

Spontaneous confabulation with temporal juxtaposition

Mr J; accepted by team via acute hospital care with WE, Took one year to settle into the specialised nursing home. He was a manager in a car tyre distribution centre.

Extract from interview after one year as a resident at the Nursing home.

Q: How are you Mr J? how are you finding things? P: Things are a bit hassled just now...

Q. Oh, what's the problem? P: There is a cock up on the orders, cant get the staff to process things properly and we have been very busy..

Q; What orders are we talking about? P; What do you mean?

Q: you said that you were running into problems with orders..... P: oh, just an order....

Q: an order for what..? P. Tyres of course..

Q. Ah, yes.....are you busy P. Yes but it is not helped by the staff....

Q. Do you know that you are in a nursing home.....? P. Of course I do.....

Q. Ok....do you know who this is (pointing to the key nurse) P. That's XXX, she helps me.....

Q. Helps you with what.....? P. The orders of course.....

Q do you stay here at night? P. No of course I don't!.

Q. Have you ever had a problem with alcohol? P; no, what makes you ask that?

Q: oh, its just that, that is why you are in the nursing home here.. P: oh.....

!conversation forgotten and started again next interview!

Reasoning problems

Frontal lobe

Reasoning problems
a clinical example

Useful bit about medical history

- Numerous episodes of alcohol admissions with evidence of encephaolpathies: either hepatic/Wernicke or withdrawal related delirium
- Multiple fractures and collapses, multiple trauma to head, culmination in a fractured skull in 1998 and related subdural haematoma and related convulsions.
- 2007 demonstrated a cerebral infarct; right temporal lobe.
- Convulsions are recurrent and partially stabilised with sodium valporate.
- Admitted into acute care: drunk, hallucinating, fitting, profound cognitive damage

Reasoning problems

- When patient drinks 3-4 cans of alcohol:
  - Refuses or non compliant to medication
  - Disruptive and abusive
  - Grand mal convulsions
- Patient thinks that his only problem is convulsions due to head injury
- Patient does not have long term recall of personal life events and alcohol history
- Patient cannot relate alcohol ingestion to convulsions
- Patient is insistent that he has access to alcohol
- Patient is able to maintain some memories of agreements and plans relating to exposure to alcohol with support.

Reasoning problems

P: Why can't I go to the pub?
A; Because when you drink, you have a fit and end up in hospital.
P: It's the fits that get me into hospital
A: Yes, and it's the drinking that sets the fits off
P: But I go into hospital because I suffer from fits and that was caused by my head injury.
A That's true but when you drink it makes your fits happen as well
P. But the doctors told me that I have to have tablets to stop my fits.
A. Yes that right, but alcohol makes your fits worse.
P. But my fits are because I have had a head injury…the doctors told me!
A. Yes, that's right, but the head injury makes you more likely to have fits when you drink
P My tablets stop the fits
A But not when you drink
P But the head injury causes my fits….

(extract from interview with patient)

A case of reasoning difficulty

P: Why can't I go to the pub?
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P: It's the fits that get me into hospital
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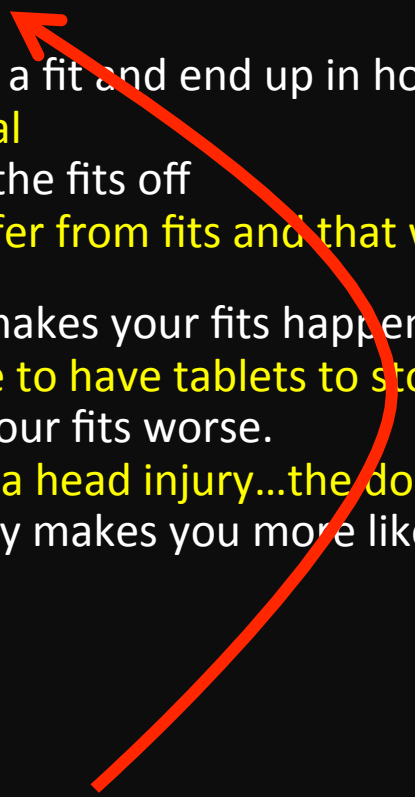

(extract from interview with patient)

Principles in service development

- Development of a single point of referral in an area
- Develop a care pathway
- Build expertise in diagnosis and management
- Assertive follow-up and management
- Adoption of patient-centred approach to rehabilitation
- Ready access for specialist services to wider mental health expertise
- Provision of in-patient access and access to longer-stay institutions.
- Adaptation of community alcohol treatment services
- Liaison with A&E, Homeless organisations and AT services

The intervention

- **The model is:**
  - Easily generalisable
  - Low cost (or cost saving)
  - Involving relatively little medical involvement.
  - Care planning (and potential case management)
    - Adoption of basic nursing and occupational therapy skills
  - A simple learning approach by which non specialist carers, family and staff can be supervised
  - A method by which nursing homes, institutions and domestic agencies can be informally trained and supported through supervised management

Overview of management[1]

Phase 1
Acute in patient care on medical/surgical ward
Physical stabilisation and thiamine

↓

Phase 2
2-3 month assessment phase — alcohol effect wears off
Protection from alcohol, nutrition, on-going assessment

↓

Phase 3
3 year program of management/improvement — brain cell regeneration
Learning and educational, programme in ADL

↓

Phase 4
Placement and provision of optimum support
Optimising help around remaining deficits and housing

↓

Phase 5
On-going social support and integration
Social integration and occupation development

A typical case

- 44 year old woman
- Senior executive
- Waiting for a bus….

When assessed

- Malnourished
- Ascites (thought she was pregnant from rape three years ago)
  - Anterograde memory problems
  - Patchy retrograde problems
    - Temporal juxtaposition/confabulation
  - Higher order reasoning difficulty and conceptual problems

Treatment

- Residential setting (specialised) one and a half years.
- Diary keeping, alcohol education, activity scheduling, graded tasking, socialisation and building connections with family.
- Treatment continued with support at home
- Children now spending nights over
- Voluntary job

- Now living independently and paid secretary job

Service reviews

Overview of the service

Cheshire and Wirral Partnership NHS Foundation Trust

1. Purpose of the service
    1. To reduce acute hospital use
    2. To promote autonomy and independence of ARBD patients
    3. To prevent relapse into alcohol misuse
2. Design of service
    1. Carries approximately 30 ARBD patients at any one time.
    2. 1 referral per 100,000 per month
    3. No inpatient beds
    4. 1 nurse and 1 social worker and half day consultant
    5. Patients moved progressively through nursing homes, residential homes, supported living and own homes
    6. Utilisation of the Mental Capacity Act

Referrals from acute medical inpatient care

Review 1: bed usage/ alcohol outcome (N=41)

Review 2: long term residential setting (N=57)

Review 3: care package costs (N=39)

Review 4: not completed yet (N=72)

Review 1: Patient reviews (N=41)[1]
Medical and psychiatric presentation/history
Referral from acute medical wards

History of, or presentation with co-morbid physical conditions	Number of patients	History of, or presenting co-morbid mental illness	Number of patients
Unspecified encephalopathy	8	Depression	17
Convulsions	10	Aggression	8
Peripheral neuropathy	8	Cerebral ischaemic/infarcts	9
Upper motor neurone signs	3	Subdurals/ significant head trauma or anoxic brain damage	6
Cerebella signs	4	Polydypsia	1
History of portal hypertension/ oesophageal varices	4	Bipolar affective disorder	1
Deep venous thrombosis	4	PTSD	1
Diabetes	4	Hoarding	1
Chronic urinary incontinence/renal disease	4	Heroine dependency (on methadone)	1
Hepatitis C positive	2		
Heart failure/fibrillation	5		
Pancreatic disease	2		
Duodenitis/gastritis/ulcers	5		
History of significant fractures/ dislocations	6		

- **Cerebro-vascular disease/head trauma in 1/3cases**
- **1 patient went through PICU**
- **5 patients on CTOs and one on guardianship**

Review 1: Clinical improvement[1]

N=41

Patients demonstrated improvement in all the following HONOS areas:

- problem drinking and drug use
- cognitive problems
- physical illness and disability
- experience of hallucinations
- delusions and confabulation
- problems with relationships
- problems with activities of daily living
- problems with living conditions and problems with activities
- No patients were rated as experiencing self directed injury

However, emerging depression may well be a problem

Review 1[1]

Impact on acute care

- 5 years preceding end of index admission:
  - 205 patient years
  - 41 patients had 4418 days of admission
  - 0.53 acute medical/surgical bed days per patient each patient year
- 41 patients were followed up for 85.6 patient-years post treatment
  - 295 days of inpatient care in acute medical or surgical wards
  - 0.08 acute medical/surgical inpatient days per patient each patient-year

Reduction of acute medical surgical beds by 85%

Review 2: institutional/community outcomes

N=57 completed programme (unpublished)

- 36 patients in non- institutional care (sheltered accommodation, supported living, domestic). Of these 9 patients were rehabilitated home through institutional care
  - 5 are uncontrolled drinking:
  - 4 died at home (abstinent)

- 27 (75%) of the 36 patients well in the community

Review 2: institutional/community outcomes; N=57

- 21 patients in Institutional care
  - 9 of these are profoundly ill (multiple mental and physical illnesses) and likely to remain
  - 3 have died in institutions
- 9 were in the process of being discharged from the institutional care into community care (supported living or own homes)

Review 2: summary

N=57

7 died
5 in uncontrolled drinking
9 patients are permanently institutionalised (very dependent)
38 abstinent (and 2 in controlled drinking)
9 in treatment (phase 3)
30 settled (phase 5) in non-institutional settings (4 of which have died)

- **80% abstinent (2 of which are in supervised drinking)**
- **78% either expected to be (9) or are at home/sheltered or in supported living (abstinent)**
- **18% permanently institutionalised**
- **12% mortality rate**
- **12% alcohol relapse rate**

Review 3: care package cost (unpublished)

N=39

- Total costs to the NHS funding authority (excluding cost of team).
  - Average patient cost per week:

    Initial: £747.93 End: £387.00 per patient per week
  - 52% reduction
- This includes complex cases;
  - 8 Patients with two or more psychiatric diagnoses with increased cost
    - Bipolar, behavioural problems and high risk (assault)
    - Persistent water intoxication and dilutional hyponatraemia
    - Vascular dementia, frontal infarcts and unpredictable violence
    - Anoxic brain damage (referred from PICU)
    - Resistant anxiety depression and acute agitation
    - Resistant paranoid psychoses
    - Personality disorder, psychoses (referred to CMHT)
    - Severe Korsakoff psychoses and depression

Review 3: Care package cost

Average cost per week (per patient)

Complex cases (N=8)

Initial	End	
913.63	1093.87	increase of £180.25 per week (allow for inflation)

8/8 complex cases continued on either joint LA/Health or Health funding

Simple cases (N=31)

Initial	End	
705.17	**204.70**	**reduction £500.47 per patient per week (70% reduction)**

20/31 simple cases had no health costs by the time they had been through the programme

Review summary

The vast majority of ARBD patients are likely to improve if provided with appropriate treatment and care.

Outcomes:

- Improvement in HONOS scores (NB emergent depression)
- Significant reduction in acute hospital bed days (85%)
- Significant majority are able to live relatively independently without on-going institutionalisation (75%)
- An active treatment program is associated with 52% reduced cost of care across three years and 70% in non complex cases
- There is a relatively low mortality rate (12%)
- There is a relatively low relapse rate into uncontrolled alcohol misuse (10-20%)*

* Review 4: (N=72)Rate of relapse increases to 22% when including homeless, drug users and increased number of capacitated patients and following up for more years

So perhaps we can break the cycle

- Relatively cheap service provision
- Potentially cost saving
- Utilising basic principles of psychiatric practice similar to head injury rehabilitation
- Easy to develop expertise

Cheshire and Wirral NHS Trust
Wirral CCG

RCPsych Guideline
CR185

Ken.wilson2@cwp.nhs.uk

Wilson et al. Alcohol and Alcoholism (May/June 2012) 47(3): 304-311 first published online January 25, 2012 doi: 10.1093/alcalc/agr167