## GHB/GBL Information Pack

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This information pack has been prepared by the Northwest Addiction Specialists in collaboration with the DAT and clinicians from non-statutory agencies. We are thankful to Dr James Bell of South London and Maudsley for sharing their medication protocols for managing the withdrawal syndrome.
1. Background Information on GHB/GBL

Gamma hydroxybutyrate (GHB) is a naturally occurring substance found in central nervous system. It was first synthesised in the late 1800s and used for medicinal purposes as a general anaesthetic, treatment of depression and insomnia and is still used for narcolepsy in the USA. In recent times, GHB has become increasingly popular on the rave party scene due to its euphoric effects, and also among the gay community as it promotes sexual disinhibition. It has also been reportedly used as a date-rape drug as it is colourless, tasteless and odourless liquid. GHB was categorised as a Class C drug in the UK in 2003. However, its pro-drug Gamma butyrolactone, (GBL) is still legal and is widely available as a commercial cleaning agent. Once ingested, it has the same effects as GHB.

Clinical Presentations

Majority of individuals use GHB/GBL recreationally. The prevalence of those who develop dependence on the drug remains unclear.

Acute intoxication

It is not uncommon for users of the drug to present to the Accident and Emergency Departments (AED) in an intoxicated, comatose state. The majority wake up after a few hours, but a few have required ventilation on the Intensive Care Unit. Some have developed withdrawal symptoms after waking up from the coma. A report done by St Thomas’ Hospital in London reported an average of 3 presentations per week in 2006, (AMCD, 2008). This reflects other reports worldwide. Management of the presentations is generally supportive. It is important that GHB/GBL withdrawal is considered as differential diagnosis for patients presenting with acute delirium.

Dependence Syndrome

As stated above, users may develop withdrawal symptoms on waking from coma in the AED. These symptoms include restlessness, anxiety, tremor, sweating, tachycardia, autonomic instability, chest pain or tightness, aches & pains, hypersensitivity to sensations, hallucinations, delirium, and convulsions. Death during withdrawal has also been reported, (Wojtowicz, 2008).

There has been an increase of cases presenting to the drug team for help to ‘come off’ GHB/GBL. As with any assisted withdrawal, there is need to ensure that this is carefully planned and done in a safe environment. Aftercare arrangements need to be in place to reduce risk of relapse.
2. GHB/GBL Flow Chart

Initial Contact
(Face to face or phone call)

Acute intoxication or Overdose

To attend A&E dept
- Assessment
- Supportive treatment

Advise about GHB/GBL *
Discharge if clinically fit
Patient Information leaflet *
Sign post to drug services

Not intoxicated

Advise about GHB/GBL *
Arrange assessment with key worker

Assessment: use Guidance **
Identify level of use
Book for Dr’s Assessment
Patient Information leaflet *

Evidence of dependence and withdrawing from GHB/GBL

To attend A&E dept
Call ambulance if necessary
Courtesy call to A&E staff
Send Information pack to A&E and Physicians ***

Drug team to maintain liaison with general hospital
Aftercare plans to be arranged by drug team

Evidence of dependence, but not withdrawing from GHB/GBL

Dr’s Assessment confirms dependence and risk factors
Motivation for change/detox

Discussion with Kenyon House
Referral to Physicians
(Enclose Information Pack for A&E and Physicians***)
Referral to Care Managers

* ** *** denotes attachments
3. Guidance for assessing patients using GHB/GBL

Along with the usual assessment procedure, please ensure that the following information is also obtained. This will help in establishing whether GHB/GBL is used in a recreational way or in a dependent pattern. The information will also help in making a decision about the level of assisted withdrawal that will be required and the setting in which this can take place.

**GHB/GBL Use**

1. Age at first consumption
2. Current consumption – GHB or GBL, Home made or pre-mixed
   - Quantity used
   - Frequency of use in a day
   - Duration of current consumption
   - History of accidental overdoses and A&E attendance
3. Periods of abstinence and how this was achieved
4. Previous withdrawal symptoms
   - Tremors
   - Anxiety
   - Hallucinations
   - Seizures
   - Confusion
   - Whether hospital admission was required, and where
5. Use of other drugs and alcohol, including steroids
6. Current social circumstances
7. Complete assessment as usual

**High Risk Factors Identified** *(if any are present, the individual will need close monitoring in hospital)*

1. Using more that 6 times in a day Y/N
2. History of severe withdrawal symptoms Y/N
3. Co-dependence on other drugs and alcohol Y/N
4. Other risk factors identified Y/N Please state…………………………..

All individuals should be booked and assessed by a doctor, then follow the management plan. The patient should be advised NOT to stop taking the drug abruptly.

**Management Plan**

1. Discuss all case with Kenyon House; it may be possible to arrange direct admission to the unit
2. Refer to local Physicians if Kenyon House does not feel that admission there is appropriate.
3. Refer to Care Managers as with any cases undergoing detoxification
4. Ensure that adequate Aftercare is in place
5. Review progress of the this plan fort nightly of more frequently depending on need
4. Medication protocol for managing withdrawal syndrome – Inpatient only

(Adapted from protocols shared by Dr James Bell, London)

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Medication</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Diazepam 10-20mg</td>
<td>CIWA-Ar + 20mg if agitated</td>
</tr>
<tr>
<td>2</td>
<td>Diazepam 10-20mg + Baclofen 10mg</td>
<td>CIWA-Ar + 20mg if agitated</td>
</tr>
<tr>
<td>3</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>4</td>
<td>Diazepam 10mg</td>
<td>if symptomatic on CIWA-Ar</td>
</tr>
<tr>
<td>5</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>6</td>
<td>Diazepam 10mg</td>
<td>If symptomatic on CIWA-Ar</td>
</tr>
<tr>
<td>7</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>8</td>
<td>Diazepam 10mg prn + Baclofen 10mg</td>
<td>CIWA-Ar</td>
</tr>
<tr>
<td>9</td>
<td>Continue 4 hourly CIWA-Ar; anticipated <strong>maximum</strong> dose on day 1 is Diazepam 60mg + Baclofen 30mg</td>
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*CIWA-Ar – Clinical Institute Withdrawal Assessment of Alcohol, revised

<table>
<thead>
<tr>
<th>Day 2</th>
<th>Medication</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>Diazepam 10mg qds + Baclofen 10mg tds</td>
<td>If agitated</td>
</tr>
<tr>
<td>3</td>
<td>Diazepam 10mg qds + Baclofen 10mg tds</td>
<td>If agitated</td>
</tr>
<tr>
<td>4</td>
<td>Diazepam up to 30mg/d Baclofen 10mg bd</td>
<td>If agitated</td>
</tr>
<tr>
<td>5</td>
<td>Diazepam up to 30mg/d Baclofen 10mg bd</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Diazepam 10-15mg/day Baclofen 10mg nocte</td>
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<tr>
<td>7</td>
<td>Diazepam 10-15mg/day Baclofen 10mg nocte</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Diazepam 5-10mg nocte</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Diazepam 5-10mg nocte</td>
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</tr>
<tr>
<td>10</td>
<td>Diazepam 5-10mg nocte</td>
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**This is an empirical protocol requiring adjustment in individual cases. The information contained in the protocol is provided for use by appropriately qualified professionals. Every reasonable care has been taken to ensure accuracy of the contents and this can be modified or replaced with new data and protocols. Healthcare professionals have the responsibility to use clinical judgement in using this guidance with individual patients.**
5. Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)

Patient:__________________________ Date: ________________ Time: __________ (24 hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute:_________________________ Blood pressure:_____  

NAUSEA AND VOMITING -- Ask "Do you feel sick to your stomach? Have you vomited?" Observation.
0 no nausea and no vomiting
1 mild nausea with no vomiting
2
3
4 intermittent nausea with dry heaves
5
6
7 constant nausea, frequent dry heaves and vomiting

TACTILE DISTURBANCES -- Ask "Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?" Observation.
0 none
1 very mild itching, pins and needles, burning or numbness
2
3
4 moderate itching, pins and needles, burning or numbness
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

TREMOR -- Arms extended and fingers spread apart. Observation.
0 no tremor
1 not visible, but can be felt fingertip to fingertip
2
3
4 moderate, with patient's arms extended
5
6
7 severe, even with arms not extended

AUDITORY DISTURBANCES -- Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.
0 not present
1 very mild harshness or ability to frighten
2 mild harshness or ability to frighten
3 moderate harshness or ability to frighten
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

PAROXYSMAL SWEATS -- Observation.
0 no sweat visible
1 barely perceptible sweating, palms moist
2
3
4 beads of sweat obvious on forehead
5
6
7 drenching sweats

VISUAL DISTURBANCES -- Ask "Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.
0 not present
1 very mild sensitivity
2 mild sensitivity
3 moderate sensitivity
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

ANXIETY -- Ask "Do you feel nervous?" Observation.
0 no anxiety, at ease
1 mild anxious
2
3
4 moderately anxious, or guarded, so anxiety is inferred
5
6
7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

HEADACHE, FULLNESS IN HEAD -- Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.
0 not present
1 very mild
2 mild
3 moderate
4 moderately severe
5 severe
6 very severe
7 extremely severe

AGITATION -- Observation.
0 normal activity
1 somewhat more than normal activity
2
3
4 moderately fidgety and restless
5
6
7 paces back and forth during most of the interview, or constantly thrashes about

ORIENTATION AND CLOUDING OF SENSORIUM -- Ask "What day is this? Where are you? Who am I?"
0 oriented and can do serial additions
1 cannot do serial additions or is uncertain about date
2 disoriented for date by no more than 2 calendar days
3 disoriented for date by more than 2 calendar days
4 disoriented for place/or person

Total CIWA-Ar Score ____ Rater's Initials ______ Maximum Possible Score 67

This assessment for monitoring withdrawal symptoms requires approximately 5 minutes to administer. The maximum score is 67 (see instrument). Patients scoring less than 10 do not usually need additional medication for withdrawal.

6. Information leaflet for staff (prepared by DAT and clinicians)

1. Suggest they come in for an assessment – preferably within 24 hours.

It is likely that calls may come from people in crisis or people who are concerned for others. Due to the nature of GHB/GBL use it is difficult to give advice over a phone without seeing the person. What can be said is the following:

Information on GHB

GHB and GBL are very similar acting substances. They often come as a colourless liquid which can taste slightly salty. They can give a feeling of euphoria, lower your inhibitions and make you feel sleepy.

They are often taken in teaspoon or capful amounts, although this can become very frequent. GBL may be taken occasionally by people in clubs as part of a night out, if so these people may need to look at their reasons for taking it and support in ceasing their use.

Other people may come to use it more often and not always in a social context. Dependence to GHB/GBL can develop which can at its most severe lead to round-the-clock-dosing, where it may be taken every few hours.

GBL is often used in industry as a solvent or paint stripper, so is often diluted or ‘mixed’ in order to be taken.

Often GBL may be obtained ‘pre-mixed’, because it is colourless and almost completely tasteless there is no way of knowing how strong the mix is. The danger with this is that it can lead to overdose or damage (burn) the throat.

The effects of taking GBL can start after 10 minutes and last for several hours, although regular users can develop a tolerance which means they need to take it more frequently to get the same effects.

People can become dependant on GBL and experience problems when they suddenly stop using it. This can include nausea, extreme anxiety which may develop into psychotic episodes/ severe mental ill health and even fitting or collapsing/ losing consciousness.

This is why for people who may feel they are dependant it can be dangerous to stop suddenly.

If, for whatever reason people have stopped suddenly or are about to, and they feel they are dependant then they should be directed to A&E immediately.

It is not the policy of Manchester services to advocate the continued use of a controlled substance. However for people who feel they may be dependant the potential risks of stopping suddenly must be pointed out.

Where people feel they can reduce their use/ frequency of using this should be encouraged but people should still be directed to attend an assessment to identify what support they can be offered in doing this.

GHB is a class C drug and GBL soon will be. This means that if found with it, or if you are suspected to possess it you can be arrested and it will be taken from you.

In any case, unless they require urgent medical attention people are requested to come in to service to get assessed.
Check list

1. Explain what GHB/GBL is (if required) and its legal status.

2. Ask them their current regularity of dosing, any prior experience re withdrawal/ overdose

3. Anecdotal evidence that every other day use can still result in a dependant which means it may be possible to experience severe withdrawal. So explain risks of suddenly stopping.

4. If they are unable to get supplies direct them to A&E

5. Re-iterate that they are best coming in for an assessment to explore their options.

When people present

Assessing dependence can be difficult as there is such variety in the formulations or mixes of GBL that no two doses are the same.

In order to access whether someone is dependant the following triggers may be useful – but are by no means exhaustive.

- Whether the person is using more than once a week – every other day.
- Whether they have had previous bad reactions to cessation in use
- Whether they are using GBL socially/occasionally or alone

Other issues to consider at assessment

GBL and Bodybuilding

GBL and GHB have often been used by bodybuilders as people believed they aided sleep and built muscle mass. There is no evidence that these substances have those properties. Presenting clients may be experienced steroid users, in which case it would be prudent to ask if they are engaged with a needle exchange and if they have had a recent LFT. If not direct them to Lifeline.

GBL and risk taking (Sexual Health)

GBL has been referred to as a sex drug, especially within the gay scene. This may mean that assessment should discuss whether clients are engaged with sexual health services or if they want a GUM referral.

GBL and HIV Treatment

If client is currently taking other medications (especially anti-retrovirals) these may react with some of the current treatments for in-patient detox from GBL (ie. Pentobarbital). For that reason other medications being taken need to be known or at least highlighted for a subsequent clinical assessment to expand upon later if a detox is being pursued.

GBL and Toxicity risks

GBL and GBH have a steep dose-response curve, meaning that a small increase in dose can have a big difference in terms of acute overdose/toxicity. GBL depresses the central nervous system, so an overdose can be dangerous if people are left to ‘sleep it off’. They should present at an A&E immediately.
Current pathway

At present people who are assessed as severely dependant on GHB/GBL require an in-patient detoxification. Due to the high amount of benzodiazepines/ pentobarbital prescribed as well as the difficulties in managing these patients, it has not been possible to detoxify these patients by accessing traditional drug detoxes (Kenyon etc.)

The typical route for these patients has been to be treated in an acute medical setting with close monitoring of breathing/vitals as well as access to ventilator.

This process may require 5-10 days. Once this has been completed transfer to regular detox is possible. To start on this pathway a client will need a clinical assessment. In Manchester the routes for this are as follows;

North and Central Manager - Dr Greg Keynes: 0161 272 5213

South Manchester - Dr Catherine Muyeba: 0161 490 2251