

DWI – PROGRAMMS – How to make them effective ?

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Abstract

Drink driving is one of the biggest road safety problems. But compared to for instance speeding the reason for this problem is based on many very different aspects of our civilised life. And as a consequence the solutions to reduce the impact which drink driving has for road safety have to be also 'multidimensional' and have to address many different aspects of the modern social society. Only technology can not solve this problem – but appropriate technology can guarantee best success to improve road safety.

The overall ecological, ethical and social structure of a society is the basis for both – the reasons of such drink driving situations and the source of the best solutions which are appropriate to reduce effects of such.

Epidemiological studies are necessary and have to show the correlations between pure facts, like road accidents and fatalities, and for instance alcohol levels in the body and other individual and situative factors like age, sex, brightness or darkness, tiredness, traffic density etc..

The legal medicine has to provide based on these findings clear fundamental information for the legislators and judicial practitioners to judge drink driving situations and events. The legal regulations can differ very much from society to society. There is no right or wrong legislation in place, it is more to differentiate between appropriate and inappropriate legislation.

The law enforcement agencies has to fulfill the need to execute existing laws, using appropriate procedures and tools, in this case alcohol detecting and measuring instruments and have to use them in a way that results are judicially acceptable.

Here it will be shown that too simple tools – instruments, or weak procedures for using these tools, may be in the overall sequence of enforcement expensive. If the acceptance of the results is not assured according to the complete field of scientific knowledge about breathtesting, doubts on the reliability of results may damage a complete enforcement program.

Therefore responsible program-managers have to structure their program accordingly and have to prevent such damages to occur.

In detail it is recommended for Taiwanese application to implement at least the 'dual test' procedure for all their units to prevent reliability discussions to occur, when discontinuous, non-profiling, measuring concepts are in place in the instruments used.

Especially with the internet the legal discussions about reliability etc. of breath alcohol instruments used for evidence in law enforcement have become global, there are no longer local or regional discussions. Therefore the weaknesses of such instruments are known all over the world – and can be used everywhere to question reliability of procedures and results. This generates automatically the need to keep the instrumentation used at the high level technology can offer today, to be ahead or at least 'state of the art' to prevent any flaws in the procedures to occur and to threaten effectivity of the programmes.

The Dräger breath alcohol instruments are discussed in the view of this aspect.

I Introduction: Alcohol and driving – a multidimensional problem

It is common understanding to talk about 'Alcohol' and mean at the end ETHYL ALCOHOL, the well known product of the natural fermentation process of different compounds. Best known beverages based on this process are wine and beer.

Already in the old Babylonian community (more than 3000 years ago) alcoholic beverages have been a well known incentive for successful work of servants. They got a fixed amount of beer as incentive. – A quite modern approach .

The psychoactive effect of alcohol seems to be attractive for human beings, and made this substance the most common drug worldwide. These benefits, which are very well accepted, are counteracted with the big threat of addiction, which makes alcohol an 'evil ' in many aspects.

But there are big differences from region to region in drinking behaviour – and in regulating alcohol consumption. One of the biggest difference is based on religious rules for alcohol consumption. Also taxation is different from country to country. And is interfering with the consumption patterns, and of course cultural differences in the acceptance of alcohol as part of the social life is very inhomogenous worldwide.

Also the pharmacokinetic of alcohol in the body is not identical between human beings of different races. One of the best known difference is the enzyme deficiency of some Asian peoples, which is slowing down the burn off rate of alcohol in the body – and yielding in prolonged periods of intoxication.

Besides these substance related aspects there are a lot of issues with the habit of drinking and fulfilling duties on workplaces, which requires high concentration and attention to prevent faults and damages. The working tasks have been very simple in the pre-industrial

society, and working under the influence of alcohol was not really a problem. Therefore – even knowing the effects of alcohol, there have no regulations been set up – and limits for drinking were even not under discussion.

This changed dramatically with the modern industrialized industry and increased mobility. Risks generated by drunken drivers for both, life of people and material damages are much higher nowadays – and regulations are necessary. And in the risk assessment scientific research is nowadays focused on prevention based on psychological studies about the behaviour of persons under the influence of alcohol. Also genetic research is done actually to find a basis for qualifying people, which do not have the mysterious alcohol gene and will therefore not become addicted.

As a summary the drink driving problem is correlated at the end to social aspects of the society, economical status, technical standard in place, physiological assessments, pharmakokinetic details, genetic analysis, religious regulations, genetic analysis and aspects, ethnic aspects etc. – a real multidimensional situation.

II Alcohol consumption and behavioural changes

In the last 80 years details of behavioural changes based on alcohol levels are continuously investigated – and the knowledge about behavioural effects of alcohol is still increasing year by year.

For these studies two fields of research are most important – the epidemiological analysis of the status of impacts of drinking in road safety and workplace environment, and the scientific research in laboratories for measuring influences based on alcohol consumption, with a focus on smaller amounts of alcohol consumed and ,hidden‘ influences, which are not so obvious to be seen by simple visual inspection.

There is a common agreement inbetween the scientific community, that the contribution of alcohol to accidents on the roads are probably underestimated in the way that involved traffic participants, which are not drivers of damaged cars or which are not injured, are contributing to the reason for the crashes or accidents based on their influenced behaviour. But very often these people are not included in the investigations - and statistically not listed.

On the other hand there is also a common agreement about the fact, that more and more people are showing no obvious signs of intoxication, even when they are with blood alcohol level of 0.2 to 0.3 % BAC, which causes a normal person to be nearly unconscious . This fact is becoming more and more a problem for behaviour based analysis of intoxication (field sobriety tests) and is demanding for the solely use of chemically based tests with for instance fuel cell based breath alcohol testing instruments.

As a new field in these research activities the effects of the combination of alcohol and other (legal and illegal) drugs are investigated now more seriously. There are some findings that these combinations may cause much more dramatic influences with huge

effects on the driving capabilities of person under medication, or of person which consume alcohol as a co-consumption. This may become an important, but difficult to solve problem for future, because there are no clear one to one relations between substance consumption and effects, which are sometimes delayed in the reaction and which are not predictable.

III Legislation and judicial practice

The epidemiological research has to be a fundamental part of any legislation, because it is giving the basis with the size of the DWI-problem. But very often these epidemiological analyses are limited because there is sometimes no operational basis to test not directly involved drivers, pedestrians etc.. Therefore in many countries the epidemiological basis is the statistic of killed or injured people in the traffic accidents, with the consequence that very often in many countries legal regulations are limited to situations in which traffic accidents occurring and in which then sanctions based on blood alcohol levels are written in the legislation.

Looking at the legislation in many countries they are mainly based on blood alcohol measurement results. This is simply because in the 30th of this century the blood alcohol analysis has been improved to some extent of maturity. Especially the fundamental work of Widmark in Sweden made this test method the ,state of the art , in this time. Together with the above mentioned epidemiological research and the psycho-physiological knowledge of the effects of alcohol in the body the legal limits have been established.

Unfortunately it is a typical feature of legislative processes that changes to laws are very slow and that regulations which have once been set up, perhaps not in the best way, are very difficult to be changed.

Actually breath alcohol testing has achieved a quite mature status and is ready to be used as the standard measurement for intoxication based on alcohol. Especially the big advantage for this type of measurement is, that the result of the breath alcohol measurement test is direct available at the test site. There are no problems who is taking the blood sample and there is no delay to initiate next actions.

Historically many legislations are written with legal limits in terms blood alcohol units. This is generating the problem that, if breath alcohol tests are done, this legislation is not supporting or accepting readings in the scientifically correct breath alcohol units like mg/l, µg/l or µg/100 ml. To adopt the breath alcohol reading , the breath results have to be transferred into blood alcohol units like mg/% , % etc..

This procedure introduced the worldwide continuously ongoing discussion about the blood-to-breath ratio. And this discussion will never come to an end, because there are different blood to breath ratios during an alcohol consumption. As a consequence in the judicial practice there are safety allowances introduced for this conversion, which are generating a list of different conversion factors from 1: 2000 up to 1: 2300.

As a consequence the judicial process has become very complex. It is strongly advised to make ‚per se laws‘ for the legal limits, which are including both, blood alcohol limits and breath alcohol limits as separate limits. Sometimes it is even advisable to include urine alcohol limits. Then no conversion is necessary and the judicial process is much smoother.

And it is recommended, that the wording of these laws, dealing with chemical or medical factors, units and circumstances have to be crosschecked with chemists and medical specialists for consistency and scientific correct wording and phrasing. There are enough examples worldwide showing inconsistencies in the way the law is written, which of course is reducing the effectivity of this law.

Court cases based on road laws and traffic affairs have become a flood of cases for all jurisdictions worldwide. And often the court system is not prepared to handle these quantities of trials. Jurisdiction is becoming a mass problem for lawyers and judges. This aspect has to be taken into account in all changes of legislation: Judicial procedures for traffic laws have to become and to be simple and fast. Otherwise the judicial practice is getting unaffordable.

IV Law enforcement and drink driving

In the complete puzzle of aspects to be dealt with in the drink driving problem the direct law enforcement activities, the executive part, is just one piece to make the process successful. But for the Police it is of course the most important one. The task is to ensure that the laws are followed by the population – so simple or so difficult. For the drink driving this means a) to detect drink drivers and determine/ measure the alcohol concentration effectively in this subject and b) to prevent such events to occur, i.e. this means to deter the population to drive under the influence.

Mainly aspect a) will be discussed, because aspect b) is more a ‚marketing and sales‘ activity for road safety, which has to be organized and established following different aspects not mentioned above.

For the law enforcement the detection and measuring of alcohol is the main task. Procedures are very much different for detection and measuring, because detection is just for confirming a probable cause based on other hints. As a method a chemical testing procedure is most appropriate. The alcohol measurement on the other hand has to fulfill requirements valid for forensic procedures. These are highly demanding to follow strict procedures and ensuring, that results are forensically acceptable, i.e. ‚water tight‘.

Very important is to have the correct protocol (sequence of small steps during the testing) for the alcohol test and the right instrumentation. Also it is very important to have a clear procedure in place to qualify the instruments used to be in compliance with technical requirements established.

The technical specification and control should be done by an independent entity which is capable to fulfill two tasks, a) writing the specification in a clear structure and in correlation to the international rules and recommendations for legal metrology (OIML), and b) to establish an independent quality control for all instruments in the field, accepting to be held responsible for the accuracy of the units in the field – and finally also stand for

this accuracy in court. The independency of this technical supervisory unit from of the law enforcements agencies is important for the quality assesment of a DWI – Testing program.

The correct protocoll is esssential for the success and very important and has to be accepted by both - operators and clients/subjects. There are internationally accpeted and well established procedures in place for all types of different instrumentations and applications in the breath alcohol testing field .

First step must be a screening process, either by random selction or as a proof of probable cause based on visual observation of the driving of a subject. The instrumentation can be simple, but should be alcohol specific, because already at that stage so called false positiv readings could cause legal and judicial disputs. The right to stop any person or run an alcoholtest based on subjects behaviour must be legally supported to give the acting Police officer a clear autorisation to do this. But of course but also respect general constitutional apsects of the right of the individual. This leads sometimes to situations that in some countries screening tests are not showing a reading, but just giving a ‚go‘ – or ‚no go‘. This process is then formally not noted a breath test, and allows a consequent breath test procedure for evidence. By that the subject is legally just tested once, not to stress him too much.

For the second step in the chain of evidence the instrumentation for the evidential test has to be more sophisticated and the protocoll for application has to be very detailed. The integrity of the instrument has to be prooven without doubt, best way is to use an independent institut / entity for this (see above the statement about legal metrology). For this step the cost of the device itself is not the only important factor in the purchase process, the overall costs of the device including the effort to get the results accepted in the complete process including possible court cases and litigation has to be taken into account.

Especially for this aspect of litigation in court the INTERNET has become an universal source of arguments, and more and more protocolls of breath test protocolls (sequences of steps and procedures) has to be changed based on judicial judgements and sentences. Automatically this fact requires better program set ups to comply with the global ‚state of the art‘ knowledge about pros and cons of alcohol test program details.

Crucial details are waiting periods, number of test in a sequeence, time window for the two tests, tolerance between the two tests, refusal apsects etc. . These details have to be set also in accordance with the legal situation and already existing protocolls. This is at the end a quite complex puzzle, but solvable task.

At the end one could say that the breath alcohol testing in law enforcement is a quite complex process, ‚shooting‘ at a continously changing physiological factor, with many other effects to be taking into account like ambient temperature, breathing technics, specificity etc. . Compared to this a speed measurement in traffic control is a simple metrological tasks – just applied physics with no ‚soft‘ influences.

V Best practise – ideas for Taiwanese DWI-Procedures

In respect to the Taiwanese situation for DWI –Procedures some aspects could be mentioned. The existing specification of CNS is not in compliance with the existing OIML-recommendation R126 from 1998. It is not necessary to implement each details of the OIML – recommendation into local specification, but this recommendation gives some very fruitful proposals and rules, which have been proven internationally as reliable and well established procedures.

For instance the proposed procedures for roadside evidential testing with dual tests and regulations for interdependencies between the two individual tests seem to be quite appropriate.

For the existing instrumentation this concept of two consecutive tests should be looked at and, if possible, be implemented in requiring automatically a second breath test if the first test was positive. Important is, that this should be automatically, because any operator influence or bias should be excluded.

For mobile breathtesting the BTS (Breath Temperature Sensing) is discussed more and more internationally and the acceptance is increasing. Scientifically this BTS is accepted, just the practical acceptance is still limited, but the number of programs demanding BTS is steadily increasing. To be prepared for this discussion and potential demand the operating forces should try to get experience and training with this type of instruments. And – in case, this feature is becoming required – they are ready for this type of instrumentation and operation. At least, with having this feature implemented, the forces are prepared against these ‚global arguments‘, moving around through the internet world.

Following these recommendations and aspects given in IV and V, the program for law enforcement should be successful.

VI Policies for the future – Detection and Prevention

The effectivity of drink driving detection can be improved by changing from a detection oriented procedures to more preventive oriented procedure.

This simply means - run many, many tests on the road side, make road blocks and have high profile on these activities, using intensive media attention. This will deter possible drink drivers from driving. The examples from Australia, mainly the state of Victoria, are striking with the success in reduce drink driving events and the road tolls. As a picture of the test quantity, with a population of around 3 Mio people there are more than 1,5 Mio roadside screening tests per year.

In general the DWI – problem is not solved alone by detecting and sentencing drink driving offenders. The reason why these people drink and drive have to be evaluated. Again this requires epidemiological research and evaluation. Based on these results countermeasures have to be realized and implemented to prevent these persons from driving.

In this aspect the so called Interlock may be part of revised license reinstallation procedures with not allowing the driver to start the car without presenting a breath sample. This prevents at least the situations in which accidentally a person starts to drive because he is estimating to have lower alcohol levels. These interlocks are reducing the drink driving events to 0 during the installation period of the Interlock.

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92 年道路交通安全與執法研討會
92 年 10 月 17 日 中央警察大學

譯 文

取締酒醉駕車勤務-有效執行方式

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酒醉駕車是道路交通安全重大問題之一，但相對於超速肇因酒醉駕車的原因則來自於文明生活的層面較多，因此為減少衝擊交通安全所作的方案便針對現代社會各不同角度以多維方式產生，只有科技不足以解決該問題，而是要適用的高科技才可以成功的改善道路安全。

生態學，倫理學及社會結構均是酒醉駕車問題及減低問題之研究基礎。

病理學的研究及肇因相關性之研究均為必需，比如說交通意外或死亡事故與當時體內酒精濃度和個人身體狀況以及環境變數之間的相關性便是，比如：年齡、性別、光線明暗度、疲勞度、交通流量等。

法醫應明確提供庭上其所發掘的基礎資訊，俾司法人員據以判定酒醉駕車當時的情況並作結論。法令可以因社會不同而異，沒有所謂的對錯，只有合適與否。

執法單位為履行司法任務，需使用適當的程序及工具，故作為酒精檢測及量化的工具便需符合司法要求。

此地要解釋的是過度簡化執法工具 – 酒精測試儀器，或是使用儀器的程序未能嚴謹，可能犧牲整個執法有效性。

若執法所採測之呼氣酒精值不能確定是否完全符合呼氣科學學理背景，公信力簡弱之測試值，將使整個執法勤務為之付出代價。因此，責任重大的勤務領導者通常據以組織團隊並防止缺陷發生。

就細步而言，正是為了避免爭議，二次存證測試較為合宜。完成測試時，不需另作其他處理，儀器本身可將執法證據全部整合。

網站上有許多關於呼氣酒精分析儀的執法存證力的研討，已成為全球性的趨勢而非區域性或地方性的議題，因儀器可用於解決各個因時因地的問題，故高科技儀器的需求應運而生，採用先進或至少是相當現代化的科學儀器，是要防止危及執法成效的瑕疵產生。

Draeger 呼氣酒精分析儀便是該問題的討論核心。

I. 引言：酒精與駕車 – 一種多元位的問題

一般說的”酒精”即意指乙醇，依配方之不同經自然發酵之聞名製品，最常喝的便是葡萄酒、啤酒等。

巴比倫時代(早在 300 年前)酒精飲料即被視為是激勵僕人作工的聖品，用一定量的啤酒作誘因 – 實為相當摩登的工具。

酒精的神經效應似乎正合人性之嗜，且使該物質成為世界性的通用藥物；他因廣被接受，抵消了上癮的恐懼，就某些方面而言酒是有害的。

但飲酒行為因地域不同而各有異 – 該行為即主導酒量，其中最影響酒量的是宗教教條，此外每個國家酒稅不同也會影響消費模式，當然社會文化對酒精的接受度世界各國也不同。

酒精在體內的運動在各種族之間也不同，最聞名的不同是亞洲人的體內消化酒精的酶非常少，使亞洲人體內酒精的燃燒緩慢，致使體內產生毒素的時間加長。

此外酒精引起的問題尚有飲酒習慣與職業場所執行工作時的事故，需要高度關注以防止失誤，工業化前期勞動工作曾十分簡單，即使飲酒對工作的影響也不大，以致於即使現在已知酒精的影響，卻沒有定下工作場所對酒精濃度的限制，甚至根本沒有討論。

在現代化的企業中工業化的程度大幅改變，酒醉駕車對生命財產的危險活動力增強，規範是屬必需，就評估的危險，科學研究集中在防範未然 – 就酒後個人行為的醫學面及不含酒精基因者的個人體質作研究。

總括而言，酒醉駕車與社會面相關的問題有經濟狀況，技術標準，生理評估。

酒精生理動力學，基因分析，宗教教條，倫理觀念等典型的多角化問題。

II. 飲酒量與行為改變

在過去的 80 年間就飲酒的程度所作行為分析持續在研究中，對酒後效應所獲知識也逐年增加。

這些研究中有兩個領域最為重要：一個是行車安全及工作場所中酒後駕車之病理狀況研究，一個是就酒量的後作力以科學方式予以量化，焦點集中在小量飲酒背後不易被察覺的影響力。

科學界有一共識，那就是酒精所肇行車事故之成因可能被低估很多，有些受傷駕駛或財物損失者並非酒醉者本身，因此其酒後失調行為造成車禍未列入調查或統計。

換言之，事實證明愈來愈多的人出現酒醉狀況；即使血液酒精濃度不到

0.2 – 0.3% (呼氣中酒精濃度在 0.1– 0.15 mg/l)也會在知覺上失調；行為酒醉的問題日趨嚴重(戶外清醒度測試得知)因之以化學儀器路檢成為必需，通常用現行之電化學式酒精測定器。

在酒精與其他毒品(合法及非法藥物)之綜合效應的研究領域上或有更深入的測試，發現合併使用酒精與毒品的個案會造成更誇張的嚴重藥物副作用；因個案是用酒精吞嚥毒品或根本是瞌藥族，對駕駛行為能力有更大影響。

該狀況突顯問題嚴重性，但如何界定肇因是棘手的問題，反制方式難以在可預見的未來達成。

III. 立法與司法

病理學的研究必需以立法為基礎，因立法是問題研究的範圍，但時常病理研究受限於實驗對象的限制，即無法直接使駕駛人或行人參與實驗，故在許多國家病理實驗基礎是車禍的傷亡人口統計，因此許多國家的立法依據也是車禍統計資料來決定呼氣或血液酒精濃度。

放眼望去，許多國家均以血液酒精濃度為執法測量單位，原因是在 1930 年代血液分析的技術當時已趨成熟，尤其是瑞士名師 WIDMARK 在當時做出極負盛名的測試；以前述病理學及精神心理學知識對體內酒精效應之研究確立法定酒精濃度之建制。

可惜的是典型的立法特性顯示法令的步履通常不及反應現況，一旦成規便難改善。

事實上，呼氣酒精測試在當時已十分成熟且可做酒醉程度標準檢測方式，尤其是用呼氣來檢測酒精濃度的好處是戶外直接取樣，不耽誤時間，取樣人不需醫療專案背景。

歷史上許多立法均採血液酒精為據，演生的問題是立法數據不是科學上與呼氣可換算的單位，像是 mg/l，ug/l 或 ug/100ml，相對應呼氣酒精濃度呼氣值則被換算為血液酒精濃度，比如 mg/%，%等等；該歷程顯示全世界持續在討論血液與呼氣之間的相關換算係數，且仍無統一定論，因酒精消耗量使二者比例隨時產生變化，在司法程序上以安全為考量所訂容許換算值由:1:2000 到 1:2300 而不等。

司法程序因而變得十分複雜，十分有必要為法定酒精濃度採取單行法(即純呼氣或單採血液測試值來認定違規行為)，呼氣與血液酒精濃度視為二種不同單位，有時甚至另行立法訂定尿液酒精濃度，故而免除換算的需求，使司法程序更為順利。

要提醒的是立法的用字，涉及到化學或醫學因素的單位及環境者多由化學家，醫學家交叉持續作科學層面的修定；世界上有許多實際的例子顯示不能顧及全面整合性的立法是削弱法力效力的主因。

道路交通事件在法院案例中泛濫充斥是世界性的司法問題，且通常法院不準備處理這些大量的審判，司法權在執行上便滯礙難行，在立法的改變過程中亦將該問題列入考慮，交通法、司法程序應簡單迅速，否則便無能力執法。

IV. 酒醉駕車與執法

在處理酒醉駕車問題的整個迷思裡，現場執法行為是使整個程序成功的關鍵，對警方而言當然是最重要的一環，因為酒醉駕車是指 (a) 檢測駕駛人的酒精濃度 (b) 防止類似事件發生，亦即延遲該危險群再犯。

主要在於(a)將會再次討論而(b)是一種要推廣的觀念，需將以上未提及的各個層面組織起來才行。

就執法而言，控制呼氣酒精濃度是一項主要任務，檢查與測定的程序完全不同，檢查只是用化學方式依跡象確認可能性，但測定需符合司法程序要求之有效性，程序可以嚴謹到滴水不漏。

重點是要有正確的測試原始資料(測試細步程序)及正確指導，操作程序明確配合儀器所有技術要求亦屬必需。

技術規格及控制應由獨立專屬單位執行，該單位應具備能力達成，
(a) 製訂規格架構且符合國際標準(如 OIML)
(b) 製定儀器品質控制及執法時認可之準確度，且可作呈堂供證

該獨立技術監督單位非警政單位始可對 DWI 勤務的測試品質有效評估。

正確的原始存證資料對成功測試十分重要，且應該是操作者及被測人雙方都認可的證據；雖機型不同所採用的幾乎是世界性認可的程序可應用於戶外檢測勤務。

第一步是篩選，隨機抽檢或是經觀察後就可疑個案再確認時所作措施，儀器可以很簡單，但必需有酒精專屬反應，因為如果在篩選時便產生錯誤則在執行法令上便導致錯誤；攔停作酒測的基礎在於法律清楚授予執法人員權力作該種任務，但亦同時尊重憲法給予人民之權力，因此許多國家在作篩選測試時不顯示數據便是基於該種考量，而只顯示”合格”或”不合格”。該程序不被當成正式的測試而是決定是否進一步作司法測試，此時個案只測一次，沒有更多壓力。

第二步是結合採證用的存證式儀器，儀器更精密且存證資料更重視細節。儀器的整合性應無可挑剔，最好是獨立的研究機構來作度量衡檢定，在該階段不單是考量儀器的造價，取得可接受測試值之作業全程所付出之努力包括出

庭及判決等均被列入成本考量。

尤其是網站上就出庭審判部份所作爭辯愈來愈熱門，愈來愈多的原始存證資料(測試步驟及順序)均據司法審判判例而作修正，自然而然地勤務建制也就相繼以追求更現代化更宏觀的更專業的細節而設計。

重要的細節有：測試前等待時間的規定，第一回合測試次數，測兩次之間隔時間的設定，兩次測試相異值之容許度，拒測處理方式等等，均需作法律狀況及可用之原形資料予以設定。到最後呈現一個多維複方，但是是可以解決勤務問題的有效方案。

最終人們會說呼氣酒精測試勤務十分複雜，針對一個無恆定性的生物體尚要考量許多其他因素，比如環境溫度，呼氣技術，專業性等；與一般測速勤務只需測一數據相較，DWI 勤務要考量的軟性思考多出很多。

V. 妥善執勤方式 - 台灣 DWI 勤務程序的理想

台灣作 DWI 勤務時亦常有一些思考；在 CNS 中符合 OIML 1998 年 R126 版規範(世界酒精分析儀檢測標準規範)，但是取材部份而非全面，雖然將 OIML 全面移值來本土並非極需，但 OIML 對勤務的建議有相當成功的條款，世界其他各國勤務上亦競相採用。

比如說在該世界標準規範中提及路檢存證測試程序要測兩次並有相關規定說明如何分隔該二次測試便是一個實例。

市面上的儀器可以做兩次連續測試的值得一顧，如果第一次測出陽性反應則儀器會自動要求測第二次，重點在於”自動”功能，表示，操作者被外力引導而分心的因素完全排除。

活動式呼氣酒精測定器的可接受性在世界性研討中常被提及，科學角度而言測定器可以使用，只是使用在實際勤務上仍有限制，勤務上對酒精測定器的需求漸增，如果該單位有測定器可操作，則操作單位需要對其使用的測定器有一些經驗及訓練，至少應使該單位具備接受來自各方輿論挑戰的準備。

若有空就 IV 及 V 項的淺見再作思索，應可使 DWI 勤務更收宏效。

VI 未來策略 - 檢測及防範

DWI 勤務的成效可以由檢測方式導向防範的方式。

簡而言之，在路檢時測無數次，設無數關卡，雷厲風行週知媒體，可以拖住酒醉駕車的步履；在澳大利亞尤其是維多利亞省大規模以路檢來減少酒醉駕車及降低用路成本，當地 3 百萬人口中每年有 150 萬人接受路檢。

一般 DWI 勤務問題不是單純的測試及審判個案，這些肇事的高危險群為何飲

酒駕車的原因應被評估，再次又要仰賴病理學的研究及評估。根據研究結果，反制方式應被用在防止這些個案再度危險駕駛，在該方面 INTERLOCK（制動引擎用酒精測定器）可以就重發駕照該環節來考核個案，將酒測器連結在汽車引擎線路上，測得呼氣中無酒精時才能啟動引擎，如此可防止當事人低估本身酒精濃度而危險駕駛，在安裝 INTERLOCK 時，危險駕駛的機率幾乎為零。