A STUDY OF THE ILLICIT TABLET MARKET – WHAT CAN WE LEARN?

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I come to this environment from a little bit of a different background in that I am a forensic chemist and essentially forensic science is applied to the law, so my job is really to analyse police seizures and take those through the prosecution system in relation to drug legislation here in Victoria. But about 6 or 7 years ago, I started to look at what other services forensic science could provide other than just information for law enforcement. There is obviously the issue of prosecution and then there is the issue of drug intelligence, which are essentially key areas for a law enforcement agency; but there is a wider stream to forensic intelligence in terms of - we actually get to see factual information about seizures that are happening here in Victoria and around the country as do all the other forensic labs. So we can look at trend information from a drug analysis point of view, very similar to what Dirk was referring to in "what's going on with the pill testing" where they use a laboratory test. So what I aimed to do was try and broaden the drug information and see how we could start to use this forensic information in other environments.

We built a chemical drugs intelligence database. This was built under the Pennington era here in Victoria, where a series of public reviews were held to discuss changes in drug strategy, policy etc, As a result funding was awarded to the Forensic Centre to build a drug intelligence database, which now holds all the seizures that have occurred in Victoria since 1997. As the database grew other states realised that this was a fairly powerful tool and not just for law enforcement, but in understanding the drug culture, An opportunity arose for the development of the National Illicit Tablet Database was in 2000, this is a joint project between Victoria, the Australian Federal Police and the National Institute of Forensic Science. The information management system was designed by Victoria, and we looked at what type of information was to be captured, how we would standardise this capture which included images. The federal police provided funding to purchase equipment around the country, to facilitate this standardised approach. The National Institute of Forensic Science hosts the web site where the database is located.

Presently the national system is fairly young and there is not a great deal of data captured as of yet, mostly this is because a major problem for forensic laboratories are the enormous backlogs but that is just a burden that we have at present and hopefully we can reduce these in the future, which will improve the timeliness of this sort of data. So most of the data I present to you today is actually Victorian data, but the national data is being collated and I can say that generally the trend is consistent with Victoria, but there is really not enough data to look just at a national picture or to take Victoria's data out.

(Referring to screen) This is just a view of what the database looks like and at present it is mostly a law enforcement tool, although there are lots of other authorised users on the system that come from various backgrounds and some of those are health backgrounds, research backgrounds in particular - we provide a lot of information to different drug researching organisations about drug trends, not just ecstasy but heroin and all those other drugs that we deal with. A main aim of the national illicit tablet

database was to be able to achieve a search on the name of a design so we could look compare seizures around the country.

Other areas of interest where, are there emerging trends? Did we have particular occurrences of tablets? Could we look at the distribution across the country? Did we see things in Australia that we didn't see overseas? Part of my role is to look at our seizures and say: "well, is this reflected in the Europol data and the Drug Enforcement (DEA) data in the States or are we seeing specific designs and specific tablets that seem to have only an Australian flavour? Possibly there will be a few of those sorts of seizures, but generally we have some consistency in our ecstasy market and the overseas market but as you will see, we have a diverse market here in Australia.

When we talk about the illicit tablet market, we really talk about it in two forms: a single drug component or a multi-drug component, because that is generally how the tablets are presented. They will either contain just one drug, and commonly that is ecstasy, or they will contain a multiple of drugs. As I have described there on the list, there are a number of substances that we see in these tablets and the ones marked in the yellow (referring to screen) are what I am going to talk about from hereon in. What we have done with those is that we have said "let us consider those as the main drug", and by main drug I mean it is there at the highest purity level within that tablet, so it might have other components in it, but MDMA would be the greatest purity within that tablet - of drugs (we are only looking at drug components here.)

As Louisa referred to in her presentation earlier, we really started to see the tablet market or the ecstasy market arriving in the late '90s; and our data obviously only goes to '97 on this system, so we have not got anything younger, but from my experience it was about 95 when we were starting to see some of these tablets emerging. (Referring to screen) And from the look of that graph you can see that the later part of the '90s, was really driven by methyl amphetamine tablets, so the majority of the tablets that we saw on the Australian market actually had speed in them, not ecstasy. There were some ecstasy tablets around, but the majority we were seeing were methyl amphetamine-based. Now admittedly this data has a bias, it is law enforcement data, so whatever they pick up is what we are seeing, but it is across the broad street of law enforcement, so not just drug squads, but all the general policing, so car interceptions, anything that happens with uniform (general) policing, so it does give you a fairly broad range of seizures (so it is not just targeted operations is what I am trying to get through to you.)

(Referring to screen) The interesting thing in 2000 was the enormous jump there with ecstasy; and obviously that is biased by the fact that we had a couple of very large seizures in Victoria, that were also joint seizures with the Federal Police, so when that occurs it throws a bias in the data, but what it does say is that there is obviously quite a bit of ecstasy around and it is a key drug that we were seeing, so it is targeted, you can get a large seizure of that nature; and if we did not perhaps see those seizures we probably would have seen ecstasy high anyway, but not as high as what we are seeing there, so it is a little bit, 'kicked out' of perspective due to these large seizures, rather than a whole lot of small general policing sort of seizures or operational seizures. And as we go through the rest of those years it is a fairly steady fall out, I guess, in that ecstasy, where it occurs as a main drug (remember it may also be in combination,

it may not be the only drug in those tablets), seems to have emerged in a little stronger position than the late '90s, where we saw mostly speed-based tablets.

If we looked at the purity of those substances, we are generally looking at an ecstasy range from about 20% to 40%, which is actually fairly consistent with the previous discussion, so you are looking at something from about 50 milligrams to about 80 milligrams, depending on the tablet size, and tablet size does vary, but roughly that is fairly consistent I would say with what we are seeing here.

The amphetamine, or the methyl amphetamine or the speed-based tablets, has been fairly consistent at a low purity level and that is not surprising given the traditional powder amphetamine market where drug purity ranged between one and ten per cent. What we are seeing in the tablet market is about one to five per cent. Then, as Louisa talked about in terms of ice and base you are seeing a whole change of variety from the traditional methyl amphetamine market, which are higher purity products.

The ketamine was interesting, in that when it first really burst onto the scene, around the '99 period, they were single entity ketamine tablets, so there was nothing else in them except ketamine, in terms of active drug components. Then what we started to see was very few single-entity ketamine tablets - most of them presented in combination with other things and you have seen a purity dilution down, roughly to half of what we were seeing originally. So that is just an interesting kind of trend and when you think about ketamine, it is a diverted chemical, so it is not made in synthetic labs, it is generally been diverted out of industry, so you have got sourcing issues and all those sorts of things when you talk about illicit production.

(Referring to screen) What I have done here is picked a couple of years, and we are looking at 2000 and I have then graphed the main drugs, so the top one there is ecstasy as the main drug; and interestingly in 2000, when ecstasy occurred as the main drug, it was on its own, so it was pretty much straight ecstasy tablets - which from my perspective would say that they were imported products, so we are looking at overseas products so not surprising then that they were single entity tablets.

However, the local market was still kicking along, which was the amphetamine based tablets, and when you look at these, we are really saying that 70 to 80 per cent of those tablets were in combination with another drug substance. If we look at the amphetamine (referring to screen) one in particular (in the red section with 20%) what that says is only 20% of the tablets contained only amphetamine or methyl amphetamine. So every other tablet where methyl amphetamine or amphetamine occurred as the main drug, it was in combination with a series of other substances as I have described there. That is not surprising, because they were attempting to get into the ecstasy market, so they were wanting to give the drug more than just a stimulant effect, they were looking to substitute other materials into the tablet to provide the sorts of effects you would see with ecstasy Ketamine was quite similar, except that about 30% of the market was single entity, and the larger portion of the market also contained amphetamines; again the same issue, you were looking at providing a stimulant effect within a tablet that was essentially a ketamine-based tablet. Ketamine provides a dissociative effect.

In 2001 the picture changed slightly, in that we started to see reduction of single entity ecstasy tablets. Other drugs where present and had a dilution effects on the ecstasy level and increasing combinations occurring. We also started to see small amounts of ecstasy appearing in the combination tablets where amphetamines or ketamine was the main drug. Ketamine tablets were quite interesting - it was pretty much the whole market, 97% of the market was a combination market.

There was a lot of discussion about the fraudulent market – were these combination tablets attempting to mimic the effects of an authentic ecstasy tablet? There appears to be lot of effort in the illicit market to achieve this often resulting in misinformation and myths I guess, get out about this market.

For example ecstasy has a particular aroma and quite often here in Australia you can smell this characteristic odour, if you have got a trained nose and know what you are looking for. (Referring to screen) I have not got 2002 data here, but in 2003 you will note, over in the ketamine slide, that 'safrole' appears. Safrole is actually the precursor chemical for the production of ecstasy and that is what gives the tablet a particular odour. In 2002 we saw this right through our tablet market - very strong odours; it also affected our spot-testing results at the laboratory in that safrole gave us colours very similar to ecstasy; it took us some time to establish see exactly what was occurring. Safrole was being added to tablets to mimic the presence of ecstasy. So again it is just one of those things that occurs in an illicit market. Obviously people who are marketing these substances are clever. They want to keep their market and they want to build their market, so they look at ways to move around the information that is available. I suppose we all need to keep on top of that, both as law enforcement and health agents, how do we would manage these issues.

In 2003, we have seen a bit of a return to a lot of the single entity ecstasy being available, a lot of discussion has occurred as to whether these are imported or whether in fact there is local production. Local ecstasy production has occurred if you look through some of the ABCI or other intelligence reports, ecstasy has been produced in Australia; last year in Victoria we had one of the largest laboratories. So the capability is here now to add some further complications to that market in that we have local producers, overseas producers, and all those sorts of issues. And I guess the wider that market gets, the greater the risk in terms of the product stability, because you are looking at illicit productions, you are not looking at controlled productions. The style of tablet or recipe utilised in Europe seems to produce a strong, solid, single entity tablet, which is not what we are commonly seeing here in Australia.

In Australia the amphetamine market is particularly strong. It has really picked up its pace in being present in the illicit tablets. The strength of the amphetamine market was mentioned by Louisa when she was talking about methyl amphetamine and the types of products. So when you have got an active market, you will see changes across the different forms and we are seeing methyl amphetamine in the tablet market, in the crystal meth market, in the base market and in the powder market, so this has to affects the local production of illicit tablets that we will see.

Combination tablets, just to give you a bit of an idea of what we are talking about, obviously, as I said, are more than one drug. Logos are not specific as we heard referred to before. What we tend to see in Australia is that when there is an ecstasy

tablet, particularly in the early days when we saw a logo attached to a particular ecstasy tablet, we would see that logo mimicked in the Australian market and generally made up with a speed-based tablet. So if the 'street' word was that Mitsubishi logo tablets were out and they were a good tablet, then you may start to see other tablets being developed of a poorer quality but of the same design; and that is not surprising, it is a marketing thing, isn't it? So drug manufacturers are listening to the same information that we are listening to, but coming at it from a different angle. And obviously the 'rave roulette' becomes the issue and how you go about informing users that logos are not a good way to monitor your drug use and your tablet quality.

We looked at 5,000 Mitsubishi tablets (referring to screen) that we had received - so this is 5,000 tablets from a whole range of seizures across a year. We just sort of picked out some basic seizures. We looked at those Mitsubishi logos for consistency, because when you look closely at the logos you can see a number of variations in the logos, not surprising, a number of manufacturers is probably what we are seeing, a number of pill presses, etc. So what we did with this study is we looked with our comparison microscope at logos that had a lot of similarity, so there could be a view that they were made probably from similar presses or similar syndicates. What we found with those tablets was that 57% of them were combination tablets, which is actually pretty high, we were a bit surprised by that level. And that when we looked at what type of drugs were found, 50% of them were methyl amphetamine, which I guess is not surprising, given the Australian market and that methyl amphetamine is a strong portion of this. Ketamine was present in 17% of them, MDMA in 31%. Now those figures are based on them being the main drug, not being the only drug present, so we could break that down a little bit further and say well which ones only had ecstasy and which ones only had methyl amphetamine, but generally, given that 50% of the market was combination, we looked at the total issue. So that was a bit of a surprising result for us, we did not think it would actually be that high when we looked at logos that had quite a lot of similarity in terms of tool-marking, etc.

Just to add some of the other issues, as we mentioned earlier we are seeing a rise in the ice or crystal meth; GHB, 1,4-B and GBL, but generally 1,4-B is the common substance that we are seeing utilised across the party scene and generally across our drug seizures.

To quickly sum up (I promised you it would not be a long presentation) we do have a very dynamic illicit tablet market in Australia, or in Victoria. It is a market that has combination and single entity and it does not stay in a set ratio, it shifts depending on what is available, what is being made, what is accessible; and there is no quality or standard on production (but that would not surprise any of us) in either drug type or drug purity. And so we have the polydrug issue that Louisa referred to, but you actually have this polydrug environment often within the one particular substance, the tablet that you are taking. I think that raises certain issues for us, from both law enforcement and health; how do you manage that kind of environment and how do you educate across that kind of environment.

Thank you.