Capital Health

MEMORANDUM

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To: Pain Management Unit, Capital Health
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All Capital District Health Authority (CDHA) Physician Offices and Nursing Units

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Date: March 12, 2014

Subject: **Changes to Drugs of Abuse Testing by the Toxicology Laboratory at Capital Health**

Effective April 14, 2014, the Division of Clinical Chemistry at Capital Health will begin employing Tandem Mass Spectrometry (TMS also known as liquid chromatography-mass spectrometry- mass spectrometry) to test for Drugs of Abuse (DoA) and will expand the list of tests (menu) it will offer. At present, we test using immunochemistry for screening and we offer testing for the drugs and/or their metabolites listed in Table 1. To date, these screening cutoff values have followed US Federal workplace cutoff values*:

Table 1

Substance	Initial drug test/ Screening Cutoff level by Immunoassay (ng/mL)
Amphetamines	1000
Benzodiazepines (Tested as a Group)	200
Cocaine metabolites (Benzoylecgonine)	300
Cannabinoids	50
Opiates and metabolites (Codeine and Morphine)	2000
Phencyclidine	25
Ethyl Alcohol[b,c]	20 mg/dL

* US Department of Health and Human Services. Mandatory guidelines and proposed revisions to mandatory guidelines for federal workplace drug testing programs:notices. *Federal Register*. April 13, 2004; 69(71): 19659-60.
Please see: http://ncadistore.samhsa.gov/catalog/ProductDetail.aspx?produtID=16833. Accessed Nov 30, 2007.
[b] Screening by alcohol dehydrogenase enzymatic method

- The new method we intend to introduce on April 14, 2014 is TMS, and this will replace the immunochemical assay. This change will allow us to introduce faster turn around time for testing thus producing results faster. Importantly, it will also allow us to expand our test list to include drugs not tested for previously (Table 2) and introduce lower screening cutoff values. Importantly, samples that test positive for methadone upon screening,

will undergo a quantitative confirmation step as necessary. Please note that at this stage, this change will not include testing for cannabinoids and their metabolites or ethanol which will continue to be analyzed using the older methods. Changes to costing will decrease from $93.60 to $71.11 per sample.

Table 2

Substance Class	Substance	Screening Cutoff (ng/mL)
Amphetamines[a]	Amphetamine	250
	Methamphetamine	250
	Methylenedioxymethylamphetamine (MDMA)	250
	Methylenedioxyamphetamine (MDA)	250
Benzodiazipines	Diazepam	100
	Nordiazepam	100
	Oxazepam	100
	Temazepam	100
	Triazolam	100
	Alpha-hydroxy-triazolam	100
	Alprazolam	100
	Alpha-hydroxy-alprazolam	100
	Clonazepam	100
	7-Amino-clonazepam	100
	Lorazepam	100
Cannabinoid Metabolite	Tetrahydrocannabinol carboxylic acid	50
Cocaine Metabolite	Benzoylecgonine	100
Methadone	Methadone	100
	EDDP (methadone metabolite)[b]	100
Opiates[a]	Codeine	300
	Morphine	300
	Oxycodone	100
	Hydromorphone	100
	Hydrocodone	100
Phencylidine	Phencyclidine (PCP)	25

[a] Federal Register, November 25, 2008 (73 FR 71858), Section 3.4: effective October 1, 2010

[b] EDDP (methadone metabolite):2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine

Please note that the primary purpose of this testing is specifically reserved for clinical treatment purposes and is not a resource for purposes other than the above; ie screening for drugs of abuse in the workplace or for insurance purposes. These results have not undergone a quantitative confirmation step and accordingly these results are not intended for use as evidence in any related proceedings.

Please contact Dr. Nassar at 902 473 2225 (e-mail: Bassam.Nassar@cdha.nshealth.ca) or Ms. Thompson at 902 473 4065 (e-mail: Shauna.Thompson@cdha.nshealth.ca) if you have any questions.

Thank you for your attention.

C. Ms. Fran O'Brien
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