

Toxico-intelligence

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Coordinator for Toxicointelligence
Hospital Authority Toxicology Service

Toxico-

- Greek:
 - Toxicon: bow → arrow
 - poison painted onto arrow head
- Modern
 - Anything related to poisons / Toxins



-Intelligence

- information concerning an enemy or possible enemy
- an agency engaged in obtaining such information



Poisoning Outbreak Happens

- New poisons made
 - Drugs, chemicals, pesticides, DOAs....
- New human behaviour
 - Human errors, intentional, misuse....

Sildenafil + lethal dosage of glibenclamide

再證實六個案 「食半粒都會死」

壯陽藥害人愈揭愈多

含醫糖尿成份 陽痿藥超標12倍

再有6漢 疑服壯陽藥不適
累積至10人涉4種藥 一死一危

【本報訊】(記者 蕭曉輝) 本港1名男子懷疑服用壯陽藥致死，衛生署表示，去年12月至今年共有10名香港男子因血糖過低入院，其中1人已於上月底死亡。經

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Outbreak of Male Potency Enhancers that cause Fatal Hypoglycaemia

- Dec 07-Aug 09
- >80 cases
- 2 deaths, 2 brain damage

男根增長素 三鞭丸 No name, no package

壯陽藥

No name, no package

港府今公布緊急立法

入口奶品禁含三聚氰胺

毒奶禍害 毒奶問題一發不可收拾，全國腎石驟增四百萬人，總理國家實證實「絕對不住大家，對個內核」。港府則鑑於要抽管的奶類產品衆多，已經出府，最快今日宣布透過緊急立法「先刊憲後審議」程序，禁止進口奶類產品含可致腎石的三聚氰胺。此後入口商必須確保供港食品達到法例要求，否則予以檢控。

衛生署表示，目前入口商有責任確保其售出的食品，應符合立法規定的安全標準。此外，衛生署亦會與有關當局合作，確保供港食品的安全。

有關實施再立會審議

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Outbreak of Melamine-tainted Milk Product

- Sep 08 – Apr 09
- Clinics urgently set up for screening
- 56847 children assessed
- 17 suspected cases
- Enormous health cost

再有港童疑飲毒奶腎結石
200童湧瑪嘉烈檢驗混亂 周一擬致歉

2370 1805 1898 1881

1358 1495 1334 1241

928 798 88

364 422 355 467 541 563 570 536 531 556 565 757

23 24 25 26 27 28 29 30 02-Oct 03-Oct 04-Oct 05-Oct 06-Oct 07-Oct 08-Oct 09-Oct 10-Oct

Sep Sep Sep Sep Sep Sep

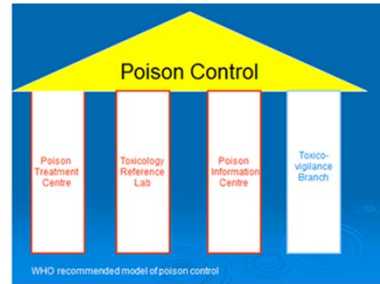
Close calls



2006 Food botulism in Thailand – 209 victims

HKPCN

Hong Kong Poison Control Network



Reactive



We Need a Better Model

Toxicointelligence Team

- To forecast, to prevent and to prepare for

New Poisoning Outbreaks

Pro-active



Toxicointelligence Service

- COLLECT
 - ▣ poisoning related information
- ASSESS
 - ▣ Risk and impact
- PREPARE
 - ▣ Communication
 - ▣ Plans
 - ▣ Lab Test
 - ▣ Antidote

Signal Detection



中华人民共和国中央人民政府
The Central People's Government of the People's Republic of China

卫生部办公厅通报2010年全国食物中毒事件情况

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CDC Home
Centers for Disease Control and Prevention
Your Online Source for Credible Health Information

Press Release

For Immediate Release: March 2, 2011
Contact: CDC Media Relations
(404) 616-3286

疾控媒体快讯
CDC Media Monitoring

《疾控媒体快讯》是广东省疾病预防控制中心与媒体沟通工作定期发行的内部参考刊物。通过对广东省主要报刊、杂志杂志、网络传媒等公共卫生健康信息进行持续监测，快速掌握媒体上对广东省疾病预防控制中心报道及突发公共卫生事件的报道，及时收集整理，并及时与媒体沟通中心反馈处理。

请读者仅作参考，不作为我们提供医疗服务的依据！

主要内容

Opioid Pain Killers Linked to Increased Risk of Some Birth Defects

Babies born to women who take opioid pain killers such as oxycodone or hydrocodone just before or in early pregnancy are at increased but modest risk of birth defects, according to a study conducted by the Centers for Disease Control and Prevention.

The study, published in the American Journal of Obstetrics and Gynecology, found 2-3 percent of mothers interviewed were treated with prescription opioid pain killers, or analgesics, just before or during early pregnancy. The study did not evaluate illicit use of these medications.

The most commonly used opioid medications reported by women were oxycodone and hydrocodone. Treatment with opioid analgesics was linked to several types of congenital heart defects as well as spina bifida, hydrocephalus, congenital glaucoma and gastroesophageal reflux. The findings, with some congenital heart defects, are consistent with previous studies.

This study found that women who took prescription opioid medications just before or during early pregnancy had about two times the risk for having a baby with hydrocephalus, left heart syndrome (one of the most critical heart defects) as women who were not treated with these opioid medications.

1. 广西禽流感疫情 100%
2. 呼吸几重打七折 肺炎高发 与流感无天
3. 北京启动出生缺陷监测
4. 内蒙禁烟 中国(保德、朔州、怀德等)人
5. 内蒙禁烟 中国(保德、朔州、怀德等)人
6. 烟台各界为留守儿童祈福
7. 重庆:采取网络措施加强疾控工作
8. 青海开展食品安全化检产品质量的卫生监督工作
9. 沪女性癌症高发 20 年上升一倍
10. 传染性禽流感 一死 (北卡罗来纳)

Collect – Automated TIMES

TIME-S | Time Intelligence Information Management E-System

HATS | Hospital Authority Knowledge Gateway

WELCOME Dr. Teri Ma LI (PIC)

Manned Input

Inbox (48)

Assessment (11)

Assessment Archive (45)

Archive (192)

Frank (41293)

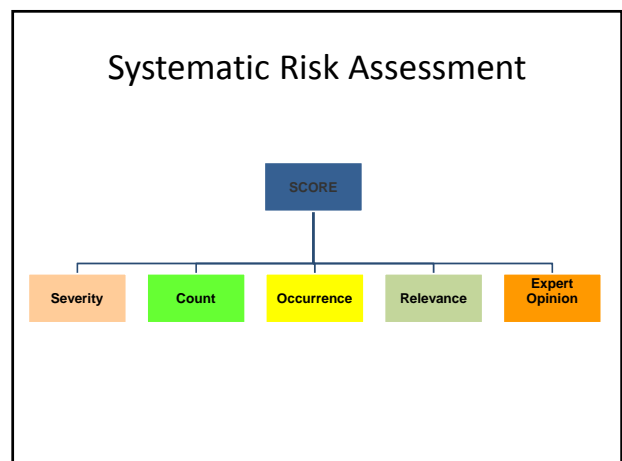
Assessment

File Manager

Forum

My Account

Case No.	Topic	Date	Last modified Date	From Unit	By User	Unit	Event to Assessment	Action
13-00413	恐怖外第一系在野毒氣化器一分鐘致命、聯合新聞稿	2013-04-17 14:30:00	2013-04-25 16:07:45	PIC	tsmt	PTC		5
13-00418	美研究:中國米穀標牌可含鎘西方國家限制供應自食密菜 潮流與健身	2013-04-12 09:41:00	2013-04-25 15:57:28	PIC	tsmt	PTC		5



Multi-disciplinary



Multidisciplinary team

- Clinical Toxicologist
- Emergency Physician
- Clinical Pharmacologist
- Physicians
- Pharmacist
- Chemical Pathologist
- Chemist
- Chinese Medicine Specialist

Networking

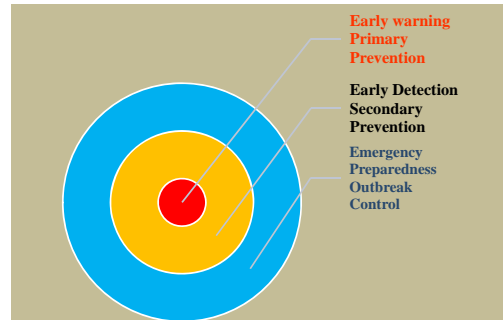


Preparedness

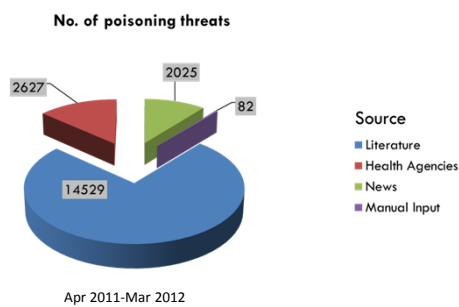
- Active surveillance
 - Clinical
 - Laboratory
 - Method development
- Risk Communication
 - Vertical
 - Horizontal
- Emergency response
 - Contingency plan
 - Equipment
 - Antidote & other treatment
 - Training



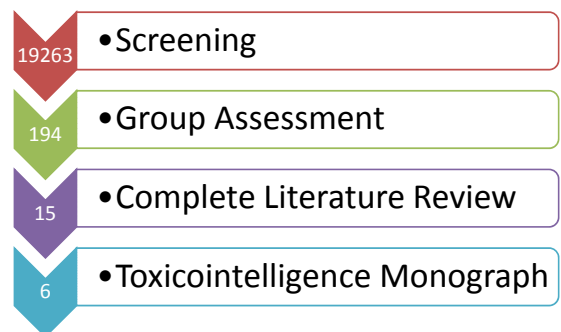
Target



~20000 pieces of Poisoning Information screened per year



Throughput Apr2011-Mar2012



New Poisons



- Dabigatran – thrombin inhibitor
- Rivaroxaban – factor X inhibitor
- New class anti-coagulants
- Thrombin inhibitor
- Warfarin substitute
- Thrombin inhibitor

Chemicals in Environment

- Bisphenol A
- Phthalates
- Diazinon
- Paraquat



Emerging Drug of Abuse

- Mephedrone
- TFMPP etc
- Methoxetamine
- MDPV
- Poppers
- PMMA/PMA
- Levamisole

Chapter	134	Title	DANGEROUS DRUGS ORDINANCE	Queen's Number	L.N. 101 of 2012
Schedule	1	Heading		Version Date	14/07/2012
PART 1				[section 2, 3, 22 & 91] (Amended L.N. 101 of 2012)	
DANGEROUS DRUGS					
(f) any compound (not being a compound for the time being specified in subparagraph (a)) structurally derived from 1-benzylpiperazine or 1-phenylpiperazine by modification in any of the following ways:					
(i) by substitution at the second nitrogen atom of the piperazine ring with alkyl, benzyl, haloalkyl or phenyl groups;					
(ii) by substitution in the aromatic ring to any extent with alkyl, alkoxy, alkyloxy, halo or haloalkyl groups; (Amended L.N. 7 of 2011)					

Toxic Contaminants

- Diethylene Glycol
- Aconite rootstocks

Biological Toxins

- Food Botulism
- Pet scorpion





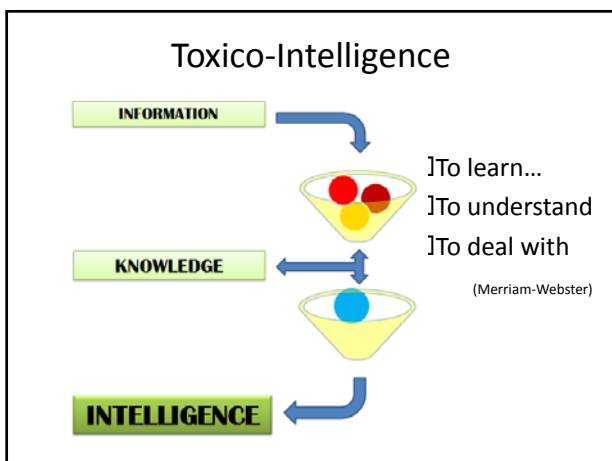
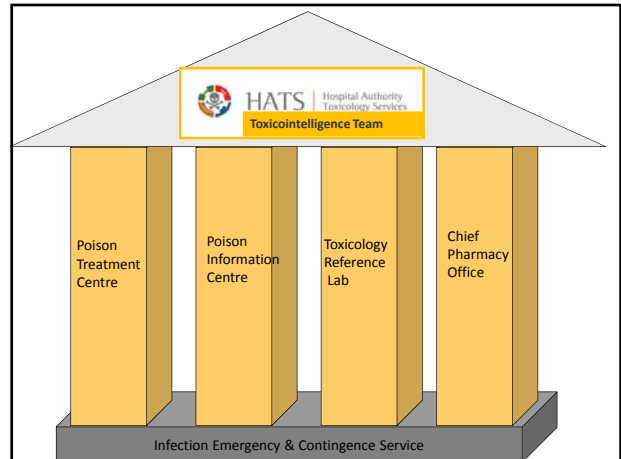
Androctonus australis
黃肥尾蠍 (N Africa)




Parabuthus transvaalicus
黑粗尾蠍 (S Africa)



Lelurus quinquestratus
以色列金蠍 (Israel)




Target Hit



POISONING ALERT

19 August 2013

Deaths after using "Death" (PMMA)
- an emerging drug of abuse in Hong Kong



Case Two deaths after using a drug of abuse (DOA), parmethoxymethamphetamine (PMMA), had occurred within the recent three months. Two middle-aged patients were found unconscious with tachycardia, arrhythmia, hyperthermia and sweating - clinical features consistent with stimulant (sympathomimetic) overdose. They developed acute renal failure, rhabdomyolysis, disseminated intravascular coagulopathy, shock and cardiac arrest despite intensive care. PMMA was detected in their urine.

PMMA, a methylated derivative of methamphetamine with street name of "Death", is an emerging DOA responsible for outbreaks of fatalities in many countries. PMMA poisoning is probably under-recognized in Hong Kong. It has been sold as "Happy #9" or as tablets (possibly disguised as "Ecstasy"). The clinical toxicity of PMMA is greater than that of MDMA ("Ecstasy").

Early treatment with liberal use of high dose benzodiazepines, aggressive physical cooling, intravenous fluid and other supportive measures are important in the management of stimulant overdose.

Message PMMA, a new DOA with high morbidity and mortality, has landed in Hong Kong. PMMA toxicity should be suspected in patients with severe sympathomimetic toxidrome. Poison information and management advice can be sought from Hong Kong Poison Information Centre. Toxicology analysis is available in Hospital Authority Toxicology Reference Laboratory.

HA Toxicology Services <http://toxicology.ha.hk>

Provider	Phone	Fax	Website
Hong Kong Poison Information Centre	2773-2271	2817-6528	http://www.hkpoison.org.hk
Hong Kong Hospital Authority Poison Information Centre	2853-4200	2853-4171	http://www.ha.hk/poison
Hospital Authority Toxicology Reference Laboratory	2853-7441	2853-7442	http://www.ha.hk/toxref
Chief Pharmacy Office	2812-4141	2812-4141	http://www.ha.hk/pharmacy
Pharmacy Office (SHEC)	2853-4888	2758-0848	http://www.ha.hk/pharmacy

Target Hit



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POISONING ALERT

an alert for the health profession

4 April 2013

Three cases of Amatoxin poisoning after consuming self-picked wild mushroom

Case Two patients (a couple) developed gastroenteric symptoms at about 11 hours after eating wild mushroom which was self-picked in Shang Mas Reservoir. Both patients developed liver failure at 60 hours. The involved mushroom was confirmed to be hepatotoxic *amatoxita* species.

Another patient presented with gastroenteritis symptoms at about 4 hours after ingestion of wild mushroom which was self-picked at hillsides of Tai Mo Shan. Amatoxin poisoning was suspected.

Amatoxin mushroom poisoning is potentially fatal. Gastroenteritis symptoms typically onset at 6-24 hours post-ingestion. A period of apparent clinical improvement may appear in 12-36 hour post-ingestion. However patient may develop liver failure, renal failure and death after 48 hours.

Message Amatoxin poisoning should be suspected in patients presented with gastroenteric symptoms 6-24 hours after consumption of wild mushroom. Please contact Hong Kong Poison Information Centre (Tel: 27722211) if you encounter any suspected case.

http://toxicology.home

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POISONING STATISTICS
TI Monographs

[Home](#) > [Toxicology Services](#) > TI Monograph 2010-2011

TI Monograph 2010-2011

Toxicology Service

TI Monograph 2010-2011

TI Monograph 2011

1. Bisphenol A - A Toxicological Review and Risk Assessment
2. Di[2-ethylhexyl] phthalate (DEHP)