

HAZARDOUS MEDICATION LIST

REDUCING OCCUPATIONAL EXPOSURE TO HAZARDOUS
MEDICATION FOR **ALL STAFF**



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Contents

Alberta Health Services / Covenant Health Hazardous Medication Classification	1
KNOWN Hazard Medication	1
POTENTIAL Hazard Medication.....	1
REPRODUCTIVE Hazard Medication.....	1
Hazardous Medication List – Key Points	2
COMPLETE List:	1
KNOWN Hazardous Medication List:	4
POTENTIAL Hazardous Medication List:.....	6
REPRODUCTIVE Hazardous Medication List:	7
Medications removed from previous Hazardous Medication List:.....	8
Special Handling Considerations for Specified Hazardous Medications.....	9
◆ Bacillus Calmette-Guérin vaccine (BCG)	9
Monoclonal Antibodies (mAbs)	9
◆ Pentamidine	9
Extended Precautionary Period for Hazard Medications	10
A. KNOWN Hazard Medications Requiring PPE for Longer than 48 Hours.....	10
B. POTENTIAL and REPRODUCTIVE Hazardous medications.	10
Appendix A: Reproductive Population Subset	11
Appendix B: AHS Classification of Hazardous Medications	12
Appendix C: NIOSH Classification of Hazardous Medications	13

Alberta Health Services / Covenant Health Hazardous Medication Classification

<p>KNOWN Hazard Medication</p>	<p>These medications are mainly antineoplastic medications as per National Institute for Occupational Safety and Health (NIOSH) Table 1, predominantly used in the treatment of cancer (chemotherapy) and in some cases, used for the treatment of other conditions (e.g., psoriasis, rheumatoid arthritis). KNOWN hazard medications are carcinogenic, cytotoxic and/or have manufacturer special handling information (MSHI) to protect workers handling the medications. Not all KNOWN hazard medications are cytotoxic or anti-neoplastic. These medications present a serious risk to the health or welfare of healthcare staff during occupational exposure.</p>
<p>POTENTIAL Hazard Medication</p>	<p>These medications meet one or more of NIOSH's criteria for a hazardous medication but are not drugs that are known to be carcinogenic or probably carcinogenic.</p>
<p>REPRODUCTIVE Hazard Medication</p>	<p>These are mainly non-antineoplastic medications that only meet the NIOSH criteria as a developmental and/or reproductive hazard. They are not drugs that are known or probable carcinogenic agents.</p> <p>These medications may present an occupational exposure risk <u>only for certain individuals</u>; staff of childbearing years regardless of gender with a potential to conceive or fertilize, women who are pregnant, or women who are breast feeding.</p> <p>Should staff members have specific questions, they should discuss with their supervisors in consultation with their personal physicians and Workplace Health and Safety (WHS) to assess the risk of occupational exposure to these medications and the option of temporarily refraining from handling hazardous medications.</p> <p>Certain Reproductive Hazard Medications may only be applicable to a subset of the Reproductive population; see key points below.</p>

Hazardous Medication List – Key Points



Indicates the medication is a **CYTOTOXIC** agent. Cytotoxic refers to a substance or process which results in cell damage or cell death.



Indicates **REPRODUCTIVE Hazard Medications** applicable to a subset of the reproductive population.

- Some REPRODUCTIVE Hazard medications have been identified to have specific parameters and may only be applicable to a subset of the reproductive population.
- Refer to Appendix A for more detailed medication-specific information.

The following products are NOT listed on the Hazardous Medication List, but may require special handling precautions:












- Salts, PEGylated and liposomal medication - only the *parent compound* is listed (e.g., doxorubicin)
- Combination products containing a hazardous medication (e.g., spironolactone-hydrochlorothiazide)
- Investigational / Clinical Trial medication as toxicological data is often incomplete or unavailable, **except** where current data indicates a hazardous risk. Follow the study protocol for safe handling precautions.
- Chemicals and / or raw powders; follow the Safety Data Sheet (SDS) for safe handling precautions
- Radiopharmaceuticals: Nuclear Medicine has policies and procedures for the handling of these products















The Hazardous Medication List will be reviewed and updated on a periodic basis as new medication or information becomes available.













Refer to Insite for the most current version.










COMPLETE List:

K = KNOWN, P = POTENTIAL, R = REPRODUCTIVE

A	
abacavir	P
abemaciclib	R
abiraterone	K
acalabrutinib 	K
acitretin	R
AFAtinib	K
alefacept	P
alitretinoin	R
alpelisib	R
altretamine 	K
ambrisentan	R
amifampridine	P
amifostine	R
amsacrine 	K
anastrozole	K
apalutamide	P
apomorphine	P
arsenic trioxide 	K
asciminib	R
atezolizumab	R
avapritinib	R
avelumab	R
aXitinib	K
azaCITidine 	K
azaTHIOprine 	K
B	
bacillus calmette-guérin (BCG) 	K
baricitinib	P
belantamab mafodotin 	K
belinostat 	K
bendamustine 	K
bexarotene	K
bicalutamide	K
bleomycin 	K
blinatumomab	P

bortezomib 	K
bosentan	R
bosutinib	K
brentuximab vedotin 	K
brigatinib	R
buserelin	K
busulfan 	K
C	
cabazitaxel 	K
cabergoline	R
cabozantinib	K
capmatinib	R
capecitabine 	K
carBAMazepine	P
carbetocin 	R
CARBOplatin 	K
carboprost	R
carfilzomib 	K
carmustine 	K
ceritinib	R
cetorelix acetate	R
chlorambucil 	K
chloramphenicol	K
choriogonadotropin alpha	R
cidofovir	K
CISplatin 	K
cladribine 	K
cloBAZam	R
clofarabine 	K
clomiPHENE	R
clonazePAM	R
cobimetinib	R
colchicine	R
crizotinib	K
cyclophosphamide 	K
cycloSPORINE	P

cyproterone	P
cytarabine 	K
D	
daBRAFeNib	K
dacarbazine 	K
dacomitinib	R
DACTINomycin 	K
danazol	R
darolutamide	P
daSATinib	K
DAUNOrubicin 	K
decitabine 	K
deferiprone	P
degarelix	K
dexrazoxane 	K
diethylstilbestrol	K
dihydroergotamine	R
dinoprostone	R
divalproex sodium	R
DOCEtaxel 	K
DOXOrubicin 	K
dronedarone	R
dutasteride	R
durvalumab	R
E	
enasidenib	P
encorafenib	K
enfortumab vedotin 	K
entecavir	P
entrectinib	P
enzalutamide	K
epcoritamab 	K
epiRUBicin 	K
erdafitinib	P
ergonovine (ergometrine) / methylegonovine	R
eriBULin 	K

erlotinib	K
eslicarbazepine	R
estradiol	P
estramustine 	K
estrogen - conjugated	P
estrogen - esterfied	P
estrogen/progesterone combinations	P
estropipate	P
etoposide 	K
everolimus 	K
exemestane	K
exenatide	P
F	
fedratinib	R
finasteride	R
fingolimod	P
floxuridine 	K
fluCONazole	R
fludarabine 	K
fluorouracil (5FU) 	K
fluoxymesterone	P
flutamide	K
fosphenytoin	P
fulvestrant	K
G / H	
ganciclovir	P
ganirelix acetate	R
gefitinib	K
gemcitabine 	K
gemtuzumab ozogamicin 	K
gilteritinib	P
gonadotropin, chorionic	R
goserelin	K
guadecitabine 	K

Bold BLUE type indicates a medication newly listed as of February 2023












* Reproductive Hazard Medication applicable to a subset of the reproductive population. See Appendix A














◆ and ◆ See special handling precautions on page 10













HAZARDOUS MEDICATIONS













COMPLETE List (continued):

K = KNOWN, P = POTENTIAL, R = REPRODUCTIVE

histrelin	K
hydroxyUREA 	K
I	
icatibant	R
IDArubicin 	K
ifosfamide 	K
iMAtinib	K
inotuzumab	K
ozogamicin 	K
irinotecan 	K
isatuximab	R
ISOtretinoin	R
ivabradine	R
ixabepilone 	K
ixazomib 	K
J / K / L	
lapatinib	K
larotrectinib	R
leflunomide	P
lenalidomide	K
lenvatinib	R
letrozole	K
leuprolide	K
levonorgestrel	P
liraglutide recombinant	P
lomitapide	R
lomustine 	K
lonafarnib	R
loncastuximab	K
tesirine 	K
lorlatinib	R
lurbnectedin 	K
M	
macitentan	R
mecasermin	K
medroxyPROGESTERone	P
megestrol	K
melphalan 	K

melphalan		K
flufenamide		K
menotropins		R
mercaptapurine 		K
methIMAzole		P
methotrexate 		K
methylTESTOSTERone		R
midostaurin 		K
miFEPRIStone		R
miltefosine		R
mipomersen		P
miSOPROStol		R
mitoMYcin 		K
mitotane 		K
mitoXANTRONE 		K
mycophenolate mofetil		P
mycophenolic acid		P
N		
nafarelin		R
nelarabine 		K
neratinib		P
nevirapine		P
niLOtinib		K
niraparib 		K
O		
olaparib		P
omacetaxin 		K
ospemifene		P
oxaliplatin 		K
oxandrolone		R
OXcarbazepine		P
oxytocin	*	R
P		
PAcLitaxel 		K
palifermin		P
pamidronate		R
panobinostat 		K
PARoxetine		R

pasireotide		R
PAZOPanib		K
peginesatide		R
PEMEtrexed 		K
pemigatinib		P
pentamidine 		R
pentetate calcium		R
pentostatin 		K
phenoxybenzamine		P
phenyTOIN		P
pipobroman 		K
piritrexim		K
isethionate 		K
plerixafor		R
polatuzumab		K
vedotin 		K
pomalidomide		K
PONATinib		K
porfimer 		K
posaconazole		R
PRALAtrexate 		K
procarbazine 		K
progesterone		P
progestins		P
propylthiouracil		P
Q / R		
raloxifene		P
raltitrexed 		K
rasagiline		P
regorafenib		K
remdesivir		P
ribavirin		R
ribociclib		R
riociguat		R
romiDEPsin 		K
S		
sacituzumab		K
govitecan 		K
selinexor		R

selpercatinib		R
selumetinib		R
semaglutide		K
sirolimus		P
siponimod		R
sodium phenylbutyrate - ursodoxicoltaurine		R
sonidegib		R
SORafenib		K
spironolactone		P
streptozocin 		K
SUNItinib		K
T		
tacrolimus		P
tagraxofusp 		K
talazoparib 		K
tamoxifen		K
temazepam		R
temozolomide 		K
temsirolimus		K
teniposide 		K
teriflunomide		P
testosterone		R
thalidomide		K
thioguanine 		K
thiotepa 		K
tisotumab vedotin 		K
tofacitinib		P
topiramate		R
topotecan 		K
trabectedin 		K
trametinib		K
trastuzumab		R
trastuzumab		K
deruxtecan 		K
trastuzumab		K
emtansine 		K
tretinoin		R



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* Reproductive Hazard Medication applicable to a subset of the reproductive population. See Appendix A





◆ and ◇ See special handling precautions on page 10

HAZARDOUS MEDICATIONS

COMPLETE List (continued):
K = KNOWN, P = POTENTIAL, R = REPRODUCTIVE

trifluridine/tipiracil (combination only) 	K
triptorelin	K
tucatinib	R
U / V	
ulipristal	R
uracil mustard 	K
urofollitropin	R

valGANCiclovir	P
valproate / valproic acid	R
valrubicin 	K
vanDETanib	K
vemURAFenib	K
venetoclax 	K
vigabatrin	R
























































































vinBLAS ^t ine 	K
vinCRIS ^t ine 	K
vinorelbine 	K
vismodegib	K
voriconazole	R
vorinostat 	K
W / X / Y / Z	
warfarin	R

zanubrutinib	K
zidovudine	P
ziprasidone	R
ziv- aflibercept	K
zoledronic acid	R
zonisamide	R

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- * Reproductive Hazard Medication applicable to a subset of the reproductive population. See Appendix A
- ◆ and ◇ See special handling precautions on page 10

KNOWN Hazardous Medication List:





A				O / P	
abiraterone	clofarabine 	gemtuzumab 		omacetaxin 	
acalabrutinib 	crizotinib	ozogamicin		oxaliplatin 	
AFAtinib	cyclophosphamide 	goserelin		PACLitaxel 	
altretamine 	cytarabine 	guadecitabine 		panobinostat 	
amsacrine 	D	histrelin		PAZOPanib	
anastrozole	daBRAFenib	hydroxyUREA 		PEMEtrexed 	
arsenic trioxide 	dacarbazine 	I		pentostatin 	
aXitinib	DACTINomycin 	IDArubicin 		pipobroman 	
azaCITIDine 	daSATinib	ifosfamide 		piritrexim isethionate 	
azaTHIOprine 	DAUNOrubicin 	inotuzumab 		polatuzumab vedotin 	
B	decitabine 	ozogamicin 		pomalidomide	
bacillus calmette-guérin (BCG) 	degarelix	irinotecan 		PONATinib	
belantamab 	dexrazoxane 	ixabepilone 		porfimer 	
mafodotin 	diethylstilbestrol	ixazomib 		PRALAtrexate 	
belinostat 	DOCEtaxel 	J / K / L		procarbazine 	
bendamustine 	DOXOrubicin 	lapatinib		<th>Q / R</th>	Q / R
bexarotene	E	lenalidomide		raltitrexed 	
bicalutamide	encorafenib	letrozole		regorafenib	
bleomycin 	enfortumab vedotin 	leuprolide		romiDEPsin 	
bortezomib 	enzalutamide	lomustine 		S	
bosutinib	epcoritamab 	loncastuximab tesirine 		sacituzumab 	
brentuximab vedotin 	epiRUBicin 	lurbinectedin 		govitecan 	
buserelin	eriBULin 	M		semaglutide	
busulfan 	erlotinib	mecasermin		SORAFenib	
C	erlotinib	megestrol		streptozocin 	
cabazitaxel 	estramustine 	melphalan 		SUNItinib	
cabozantinib	etoposide 	melphalan 		T	
capecitabine 	everolimus 	melphalan 		tagraxofusp 	
CARBOplatin 	exemestane	flufenamide 		talazoparib 	
carfilzomib 	F	mercaptapurine 		tamoxifen	
carmustine 	floxuridine 	methotrexate 		temozolomide 	
chlorambucil 	fludarabine 	midostaurin 		temsirolimus	
chloramphenicol	fluorouracil (5FU) 	mitoMYcin 		teniposide 	
cidofovir	flutamide	mitotane 		thalidomide	
CISplatin 	fulvestrant	mitoXANTRONE 		thioguanine 	
cladribine 	G / H	N		thiotepa 	
	gefitinib	nelarabine 		tisotumab vedotin 	
	gemcitabine 	niLOTinib			
		niraparib 			




Bold BLUE type indicates a medication newly listed as of February 2023






◆ See special handling precautions on page 10

KNOWN HAZARDOUS MEDICATIONS

KNOWN Hazardous Medication List:

topotecan	
trabectedin	
trametinib	
trastuzumab deruxtecan	
trastuzumab emtansine	

trifluridine / tipiracil (combination only)	
triptorelin	
U / V	
uracil mustard	
valrubicin	
vanDETanib	

vemURAFenib	
venetoclax	
vinBLAS ^t ine	
vinCRIS ^t ine	
vinorelbine	
vismodegib	
vorinostat	

W / X / Y / Z
zanubrutinib
ziv- a ^f ibercept

Bold BLUE type indicates a medication newly listed as of February 2023

◆ See special handling precautions on page 10

POTENTIAL Hazardous Medication List:

A	entecavir	levonorgestrel	progesterone
abacavir	entrectinib	liraglutide recombinant	progestins
alefacept	erdafitinib	M	propylthiouracil
amifampridine	estradiol	medroxyPROGESTERone	Q / R
apalutamide	estrogen - conjugated	methIMAzole	raloxifene
apomorphine	estrogen - esterfied	mipomersen	rasagiline
B	estrogen / progesterone combinations	mycophenolate mofetil	remdesivir
baricitinib	estropipate	mycophenolic acid	S
blinatumomab	exenatide	N	sirolimus
C	F	neratinib	spironolactone
carBAMazepine	fingolimod	nevirapine	T
cycloSPORINE	fluoxymesterone	O	tacrolimus
cyproterone	fosphenytoin	olaparib	teriflunomide
D	G / H	ospemifene	tofacitinib
darolutamide	ganciclovir	OXcarbazepine	U / V
deferiprone	gilteritinib	P	valGANciclovir
E	I / J / K / L	palifermin	W / X / Y / Z
enasidenib	leflunomide	pemigatinib	zidovudine
		phenoxybenzamine	
		phenyTOIN	

REPRODUCTIVE Hazardous Medication List:

(applicable to staff members of any gender with reproductive potential)

A	D		S
abemaciclib	dacomitinib	lomitapide	selinexor
acitretin	danazol	lonafarnib	selpercatinib
alitretinoin	dihydroergotamine	lorlatinib	selumetinib
alpelisib	dinoprostone	M	siponimod
ambrisentan	divalproex sodium	macitentan	sodium phenylbutyrate - ursodoxicoltaurine
amifostine	dronedarone	menotropins	sonidegib
asciminib	dutasteride	methylTESTOSTERone	T
atezolizumab	durvalumab	miFEPRIStone	temazepam
avapritinib	E	miltefosine	testosterone
avelumab	ergonovine (ergometrine) / methylergonovine	miSOPROStol	topiramate
B	eslicarbazepine	N	trastuzumab
bosentan	F	nafarelin	tretinoin
brigatinib	fedratinib	O	tucatinib
C	finasteride	oxandrolone	U / V
cabergoline	fluCONazole	oxytocin *	ulipristal
capmatinib	G / H	P	urofollitropin
carbetocin *	ganirelix acetate	pamidronate	valproate / valproic acid
carboprost	gonadotropin, chorionic	PARoxetine	vigabatrin
ceritinib	I	pasireotide	voriconazole
cetorelix acetate	icatibant	peginesatide	W / X / Y / Z
choriogonadotropin alpha	isatuximab	pentamidine ◇	warfarin
cloBAZam	ISOtretinoin	pentetate calcium	ziprasidone
clomiPHENE	ivabradine	plerixafor	zoledronic acid
clonazePAM	J / K / L	posaconazole	zonisamide
cobimetinib	larotrectinib	Q / R	
colchicine	lenvatinib	ribavirin	
		ribociclib	
		riociguat	

Bold BLUE type indicates a medication newly listed as of February 2023

* REPRODUCTIVE Hazard Medication applicable to a subset of the reproductive population. See Appendix A

◇ Special handling conditions. See page 10.

Medications removed from previous Hazardous Medication List:

- ruxolitinib: This medication was originally removed on v2.1 (Nov 2021) as NIOSH has reviewed and determined it to be not hazardous. However, it was inadvertently added again on v2.2 (June 2022).

Special Handling Considerations for Specified Hazardous Medications

◆ Bacillus Calmette-Guérin vaccine (BCG)

BCG, although classified as a vaccine, is used in the treatment of certain cancers. BCG should be prepared with aseptic techniques. To avoid cross-contamination, parenteral drugs should not be prepared in areas where BCG has been prepared. A separate area for the preparation of BCG suspension is recommended. All equipment, supplies, and receptacles in contact with BCG should be handled and disposed of as biohazardous. If preparation cannot be performed in a containment device, then respiratory protection, gloves, and a gown should be worn to avoid inhalation or contact with BCG organisms. Follow special handling guidelines.

BCG requires specialized clean up if spilled. AHS/COV staff: see the Hazardous Medication Insite page to access Lippincott Procedures: *Hazardous medication spill response* for information on handling hazardous medication spills including BCG.

Monoclonal Antibodies (mAbs)

While many monoclonal antibodies are classified by American Hospital Formulary Service (AHFS) as 10:00 antineoplastic medication, they are not typically classified as hazardous medication by NIOSH.

Monoclonal antibodies included on the Hazardous Medication List require handling precautions as per the PPE Guide.

◆ Pentamidine

For inhalation (administered by respiratory therapist). AHS/COV staff: follow special handling guidelines on the Respiratory Therapy Insite Page linked under Resources on the Hazardous Medication Insite page.

Extended Precautionary Period for Hazard Medications

A. KNOWN Hazard Medications Requiring PPE for Longer than 48 Hoursⁱ

Some hazardous medications require a longer precautionary period based on the time of excretion from the body. The following hazardous medications require the appropriate PPE from the start of the time of administration of the KNOWN hazard medication up to the number of days listed. ⁱⁱ

Hazardous Medication	Suggested precautionary period
brentuximab vedotin	14 days
carmustine	7 days
cyclophosphamide	5 days
DOXOrubicin	7 days
enfortumab vedotin	7 days
eriBULin mesylate	5 days
etoposide	5 days
imatinib mesylate	7 days
inotuzumab ozogamicin	28 days
ixabepilone	5 days
lurbinectedin	5 days
midostaurin	42 days
mitoXANTRONE	7 days
niraparib	5 days
polatuzumab vedotin	28 days
talazoparib	7 days
temsirolimus	14 days
tisotumab vedotin	7 days
trabectedin	14 days
trastuzumab deruxtecan	28 days
vinCRISTine	7 days
vinorelbine	5 days

B. POTENTIAL and REPRODUCTIVE Hazardous medications.

POTENTIAL and REPRODUCTIVE RISK hazard medications on the AHS Hazardous Medication List do not require a precautionary period.

This document is subject to change.

Appendix A: Reproductive Population Subset

(REPRODUCTIVE Hazardous medications with special handling parameters are indicated with an asterisk in the hazardous medication list.)

Hazard Medication	Background	Mechanism of Action	Reference Material(s)	PPE Recommendations
oxytocin	Oxytocin has been identified as a hazardous medication by NIOSH. It is considered a Table 2, primarily having adverse reproductive effects. PPE requirements are only applicable to a subset of the reproductive population.	<p>Oxytocin stimulates uterine contraction by activating G-protein-coupled receptors that trigger increases in intracellular calcium levels in uterine myofibrils. Oxytocin also increases local prostaglandin production, further stimulating uterine contraction.</p> <p>Oxytocin has specific receptors in the muscle lining of the uterus and the receptor concentration increases greatly during pregnancy, reaching a maximum in early labor at term.</p>	<p>NIOSH (2016)</p> <p>Hazardous only for women in 3rd trimester; FDA Pregnancy Category C</p> <p>Safety Data Sheet</p> <p>(Hospira) – Women working with oxytocin, and who are in the second or third trimester of pregnancy, should be informed of the potential of oxytocin to induce uterine contractions and labor.</p>	<p>Oxytocin is considered a REPRODUCTIVE Risk Medication. Per the references, the reproductive risk is identified to be in pregnant women in the 2 or 3rd trimester.</p> <p>It is recommended that the Hazardous Medication PPE described in the Guide be worn by this select group. Other individuals in the reproductive population (as described in the guide) may also choose to wear the PPE when handling oxytocin if they want to.</p>
carbetocin	Carbetocin has not been identified as a hazardous medication by NIOSH as it is not available in the USA, however PHMC has determined it should be handled in a similar manner as oxytocin. PPE requirements are only applicable to a subset of the reproductive population.	<p>Carbetocin is a synthetic analogue of oxytocin</p> <p>Carbetocin binds oxytocin receptors located in uterine smooth muscle producing rhythmic uterine contractions characteristic to deliver, as well as increasing both the frequency of existing contractions and uterine tone. Enhances uterine involution early in postpartum.</p>	<p>Safety Data Sheet and product monograph (Ferring) -- Oxytocin induces uterine contractions and may cause termination of pregnancy. Overexposure can be fatal to the mother and the unborn child.</p> <p>Carbetocin induced contractions are of a longer duration than those observed with oxytocin and are not stopped by discontinuation of therapy. Improper use during pregnancy may produce symptoms similar to those observed with oxytocin overdose (e.g., hyperstimulation of uterus, uterine rupture). (Lexicomp)</p>	<p>Carbetocin is considered a REPRODUCTIVE Risk Medication. Per the references, the reproductive risk is identified to be in pregnant women in the 2 or 3rd trimester.</p> <p>It is recommended that the Hazardous Medication PPE described in the Guide be worn by this select group. Other individuals in the reproductive population (as described in the guide) may also choose to wear the PPE when handling carbetocin if they prefer.</p>

If you require more detailed information, please contact hazardousmedication@ahs.ca

This document is subject to change

Appendix B: AHS Classification of Hazardous Medications

AHS Hazardous Medication List Review

NIOSH has not published a Hazardous Drug list since 2016. Although a 2018 list was drafted it was never published, and a 2020 list remains in draft form. The Provincial Hazardous Medication Committee (PHMC) recognized that many new medications have come to market since the last NIOSH list and staff needs to be able to handle these medications safely. As such, a working group within PHMC has developed the AHS Hazardous Medication List, using NIOSH publications as the basis for review.

The general process is described below:

1. Review the references:
 - a. Is there a Manufacturer Special Handling Information (MSHI) attached?
 - b. Do the references mention carcinogenicity?
 - c. Do the references mention cytotoxicity?

If YES place on AHS KNOWN Hazardous Medication List unless it is a monoclonal antibody (mAb). If NO **OR** a mAb, proceed to step 2.
2. If the medication is a mAb, review for specific hazardous handling:
 - a. Is there specific hazardous handling (safe handling) information that indicates a risk to handle this medication? If YES place on AHS KNOWN Hazardous Medication List. If NO proceed to step 3.
3. Determine if the medication meets the NIOSH definition of a hazardous drug but does NOT have a MSHI and the information includes one or more of the types of toxicity described in the NIOSH definition including:
 - developmental toxicity (including teratogenicity)
 - reproductive toxicity
 - genotoxicity
 - organ toxicity at low doses
 - structure and toxicity profile that mimics existing drugs determined hazardous by the above criteria
 - a. View Lexicomp information
 - i. Search for hazardous handling information (note: Lexicomp may refer to 2016 NIOSH list) related to the toxicities above; review any precautions listed.
 - b. View the product monograph
 - i. Does the product monograph list any of the toxicities mentioned above at doses lower than the human therapeutic dose?

If NO, do not add to the AHS Hazardous Medication List. If YES proceed to step 4.
4. Does the medication ONLY meet NIOSH criteria as a developmental and/or reproductive hazard?

If YES, add to the AHS REPRODUCTIVE Hazard list; If NO (i.e., has genotoxicity, organ toxicity etc.) then add to the AHS POTENTIAL Hazard medication list.

Appendix C: NIOSH Classification of Hazardous Medications

NIOSH List of Hazardous Drugs in Healthcare Settings, 2020 (currently in draft)

Group 1:

Drugs that meet the NIOSH definition of a hazardous drug and contain MSHI in the package insert; and/or are classified by the NTP as “known to be a human carcinogen,” or classified by IARC as “carcinogenic” or “probably carcinogenic.” In the 2016 *List* this table identified antineoplastic drugs, however, in this update not all of the drugs on Table 1 are antineoplastic drugs. Note that many of these medications may also pose a reproductive risk for susceptible populations. (NIOSH Table 1)

Group 2:

Drugs that meet one or more of the NIOSH definitions of a hazardous drug but are not drugs which have MSHI or are classified by the NTP as “known to be a human carcinogen,” or classified by the IARC as “carcinogenic” or “probably carcinogenic,” some of which also have adverse reproductive effects for populations at risk. This table now also includes drugs that only meet the NIOSH criteria as a developmental (including teratogenicity) and/or reproductive hazard. In the 2016 update of the *List* this table did not include drugs that only posed a developmental and/or reproductive hazard. (NIOSH Table 2)

In the 2016 *List*, Table 3 provided a list of drugs that met the NIOSH criteria of a reproductive hazard (damaging to a male or female person’s ability to conceive or carry to term an offspring) or developmental hazard (able to cause disruption in the development of unborn children including teratogenic outcomes). In this 2020 *List*, those drugs that only meet NIOSH’s criteria as a developmental and/or reproductive hazard are identified in the supplemental information column with a blue notification; a separate Table is no longer provided.

Developed by: AHS – Provincial Hazardous Medication Committee (PHMC); Hazardous Medication Evaluation Panel; PHMC Hazardous Medication List Working Group; Pharmacy Services Medication Quality and Safety Team (MQST); Health Professions, Strategy and Practice (HPSP); Pharmacy Services Technical Practice Leads, Human Factors, Workplace Health and Safety (WHS), and COV Medication Management & Safety Team.

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Please direct questions related to safe handling of hazardous medications to the WHS Services Team in your Zone or send your questions to hazardousmedication@albertahealthservices.ca

Document History

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ⁱ Product information and monographs at Drug Product Database, Lexicomp, DrugBank, and U.S. National Library of Medicine (Dailymed)

ⁱⁱ Government of South Australia, Cytotoxic Drugs and Related Waste [Internet]Department for Health and Ageing, Government of South Australia; June 2015 [cited 2021 October 22]. Available from <https://www.sahealth.sa.gov.au/wps/wcm/connect/f8aa68004b3f6cf6a340afe79043faf0/Safe+Handling+Cytotoxic+Guidelines.pdf?MOD=AJPERES&%3bCACHEID=ROOTWORKSPACE-f8aa68004b3f6cf6a340afe79043faf0-nwLgTKw>

