



NSW
Therapeutic
Advisory
Group Inc.

Advancing
quality use
of medicines
in NSW

Group Discussion: Governance of Contrast

Date: 14 December 2018

Question:

Discussions at recent TAG meetings have resulted in a recommendation to provide feedback regarding governance of contrast to the Chief Pharmacist's Unit after collating feedback from TAG members about:

- i) issues they are having with governance of diagnostic agents and
- ii) possible solutions to these issues.

Consultation with local clinical governance units for feedback regarding this issue was also recommended.

NSW TAG will also request IIMS incidents (in the last 2 years) to help inform feedback to PD2013-043 review.

Background:

Over the last year there have been an increasing number of issues that have arisen regarding the governance of contrast agents. Issues that have arisen include:

- standing orders for radiographers and NPs ;
- the integration of existing workflows with eMeds for charting IV and oral contrast agents (under the authority of a DTC-approved Standing Order). For example, at one hospital , workflow pre-eMeds involved a collaborative process between radiographer and radiology nurse with both undertaking elements of administration process (esp for IV contrast in CT area) but eMeds does not allow sequential sign-off/joint accountability for administration; and
- the lack of expertise on many DTCs with respect to radiological products.

Appendix 1 contains relevant excerpts from NSW Health Policy Directives regarding contrast.

Responses:

7 responses were received.

St George Hospital

We've taken to requiring consent at St George. In your deliberations, I think you need to take into account e-prescribing – I believe contrast might be prescribed via eMeds in the future.

Northern Sydney LHD

The implementation of eMeds has raised issues regarding the administration tasks of radiographers. All NSLHD radiographers are using the eMeds system to chart IV and Oral contrast under the authority of a Drug Committee Approved Standing Order.

However the complexity of the administration process raises an issue as at the moment administration has been a team effort between the radiographer and the radiology nurse; however, in eMeds there is only a single location in the system for signing for the administration.

Consultation with ACI Radiology Network and Chief Pharmacist's Unit (CPU), Ministry of Health (MoH) provided the following advice:

1. The person who is releasing the medication into the body is the administrator. (See PD2013-043)
2. How CT IV contrast is administered, checked/ witnessed should be outlined in a local protocol, e.g. how radiographers administer, how nurses fill injectors and witness/cross check bottles and any other cross checks, e.g. if nurse is filling the injector the radiographer may wish to cross check lines for air bubbles.
3. This NSLHD protocol would then need to go to the local Drug Committee (DTC) for approval. In summary, any injection management processes or counter signatures need to be managed locally for best practice.

NSLHD stated that this case demonstrates a number of challenges, especially around ensuring clarity of governance and accountability for actions relating to complex medicines administration, which is often made more challenging by the need to sign off administration using eMeds systems.

Although this will be an evolving space, there is concern that other LHDs will have taken quite a different approach; this variability in practice between LHDs will continue to offer challenges to patient safety and governance.

Murrumbidgee LHD (MLHD)

The governance of contrast agents has arisen on a few occasions during 2018 in MLHD.

- This question came up when planning for Rural eMEDS was being undertaken about contrast Standing Orders. The outcome was it was decided that standing orders for contrast agents would not be included in the initial build. I understand that they will revisit this again in future.
- After this discussion, medical imaging prepared some formal Standing Orders on our LHD template which they submitted to the MLHD DTC. Additional expert input (radiologist and senior radiographer) into these Standing Orders was provided over a period of time before the final versions were approved. The Standing Orders are also now available on our intranet page with other Standing Orders.
- The contrast order is documented on a "Contrast Administration Checklist" (tick iodinated or MRI gadolinium option and the checklist is also where the product sticker is added and this is scanned into the Radiology Information System (RIS) for future reference. The checklist form also has a section for the administering clinician signature, checking clinician signature and medical officer signature. (Checklist is available from NSW TAG upon request).

There are some real challenges and I don't think we've completely drilled down to all of those and how to best manage at the moment. Obtaining a second person check has been difficult practically especially at the district hospitals. Additionally, as an example we also had one district hospital note that a patient was given oral contrast when IV contrast was required for a brain CT. Further investigation noted this request was apparently provided via telephone but no documentation occurred of the order and apparently the order (as was usual at this hospital) was provided by a third party radiology provider.

We now also have Wagga Wagga Base wanting oral contrast to be administered on route for patients being transferred from smaller hospitals for scans so they don't have to wait as long when they arrive at Wagga and to improve patient flow. However, at this stage this has not been approved due to some governance concerns. We previously wrote to Martin Power about this and he escalated this to the ACI Contrast Checklist Working Group which did not recommend this practice.

So in general we have some challenges and probably the only positive steps taken this year have been the development of the formal Standing Orders that have been reviewed and formally approved by the DTC and are now available to clinicians on Staffnet. The second person check arrangements remain difficult in district hospitals.

Northern NSW LHD

We have some issues at NNSWLHD. Our local proposed work-around is to approve local guidelines for sole operator out of hours to allow administration without double checking with approved Standing Orders. We have a draft but it is not approved as yet. It will need to go through DTC in January and NNSWLHD DTC as well. This has been a very long process to say the least.

Southern NSW (SNSWLHD)

LHD Standing Order for contrast attached (available from NSW TAG upon request).

The LHD modified the Handling Meds PD to reflect the difficulty getting nurses / doctors to routinely check radiographers – I suspect this will change with the revised PD – we ask that all checkers be competent and authorised to check.

The inability to record in eMeds (oral contrast) is definitely an issue- I think it's being addressed. (Generally speaking eMeds scope should reflect the range of agents in policy / legislation).

South East Sydney Local Health District (SESLHD)

I have liaised with the SESLHD Clinical Governance Unit, and have identified similar inconsistencies to the governance of contrast agents within our LHD, which I am sure are similar around the rest of the state.

Our district QUM committee does not currently have governance over Standing Orders for Omnipaque® and Gadovist® contrasts, which are developed and governed by the individual site's DTCs. From the details below, it appears for the individual sites' clinical business rules, engaged groups also differ, as well as their approval and development processes. Noted that SESLHD has an approved guideline and prescribing protocol for the use of the oral contrast agent Gastrografin® in small bowel obstruction – given an off-label use, this did come through the district Quality Use of Medicines Committee for approval.

The complexities of whether diagnostic agents are considered to be a "medication" or not is likely a contributor to the complexities of these governance processes.

I have confirmed with our eMM build team – currently within the SESI (SESLHD/ISLHD) eMEDs domain, only oral contrast agents are built for administration in eMEDs. IV Contrast agents and any contrast administered within Radiology is out of scope from my understanding.

Policy	LHD/site	Governance of policy
<u>Prescribing Protocol SESLHDPR/570 Meglumine Diatrizoate & Sodium Diatrizoate (Gastrografin®) in Adult Adhesional Small Bowel Obstruction</u> <u>Administration of Gastrografin™ in the treatment of Adhesional Small Bowel Obstruction (SESLHDGL/055)</u>	LHD	SESLHD QUMC SESLHD Clinical and Quality Council
CBR: X-Ray Preparations with use of Contrast Mediums	SSEH	Sydney/Sydney Eye Hospital Business Rule Working Group
CBR: Administration of Intravenous iodine and gadolinium- containing contrast agents in the Medical Imaging Department and Radiation Oncology Department	POWH	POWH/SSEH Policy & Procedure Review Committee POWH DTC
Standing Order for the Administration of IOHEXOL (Omnipaque®) contrast by the intravenous route for Computed Tomography - Routine Protocols	POWH	Director of Clinical Services (Medical) POWH DTC
Standing Order for the Administration of Gadobutrol (Gadovist®) contrast by the intravenous route for Magnetic Resonance Imaging - Routine Protocols	POWH	Director of Medical Imaging Department POWH DTC
Standing Order for the administration of iohexol (Omnipaque) by intravenous route for computed tomography in medical imaging	SGH	Director of Radiology SGH Radiology Patient Safety & Clinical Quality Committee SGH & TSH Clinical Governance Documents Committee Safe Use of Medicines Committees SGH Ratified by General Manager
Standing Order for the administration of gadobutrol (Gadovist) in magnetic resonance imaging (MRI), medical imaging St George Hospital	SGH	Director of Radiology SGH Radiology Patient Safety & Clinical Quality Committee SGH & TSH Clinical Governance Documents Committee Safe Use of Medicines Committees SGH Ratified by General Manager

ACI Radiology Network Manager

Response to WSLHD regarding the following enquiries from WSLHD (similar response to enquiries from NSLHD):

- Can two radiographers administer and perform the second check for contrast?
- Does this second check have to be a RN or medical officer if contrast is administered by a radiographer as it seems to sit silent in the PD?
- When contrast is administered by a radiographer, must there be a second check?
- If there are staff shortages is administration by a radiographer alone permitted?

Response (in addition to identifying relevant sections in policy documents as seen in Background): I have sought advice from Martin Power (MoH Chief Pharmacist Unit) and CEC Nina Muscillo, Senior Manager Medication Safety.

I believe there has been much concern across NSW on the inability to meet the current requirement of the Medications Handling Policy to have a nurse/MO as one of the two checkers.

However, if a critical situation exists, I believe (from communication with Martin Power), that the procedure can continue with one checker, so as not to jeopardise the patient's condition. The next review should address this limitation.

PD2013-043 (Medication Handling in NSW Public Facilities) pages 74 -75 states that Standing Orders for Routine Procedures programs can include "contrast administered by radiographers". Local protocols how CT IV contrast is administered, checked/ witnessed should be outlined in a local protocol. Eg. how radiographers administer , how nurses fill injectors and witness/cross check bottles and any other cross checks, e.g if nurse is filling the injector the radiographer may wish to cross check lines for air bubbles.

Your LHD protocol would then need to go to the local Drug Committee (DTC) for approval of this protocol.

In summary, any injection management processes or counter signatures need to be managed locally for best practice, especially given requirement for anticipating critical events (PD2014_036), a cross check for air in the lines (by either nurse or radiographer) is a critical step, that might be in a protocol for the injection process.

Responses received as at 14 December 2018

Please note that all information and policies are only current at the time the response is sent and individual hospitals should be contacted to ascertain current policies and practices. The responses received are only representative of the hospitals participating in the discussion at the time and do not necessarily indicate a complete picture of current practices. Information sharing occurs on the understanding that due acknowledgement will be given to the original source and that the information will not be quoted or used out of the context of the discussion. Permission should be sought from the original source before any policy, protocol or guideline is used or applied in another setting.

Appendix 1

Relevant NSW Health Policy Directives regarding contrast

PD2013 043 [Medication Handling in NSW Public Facilities](#)

1. Medications include diagnostic agents administered to the patient and states that *'Each Drug and Therapeutics Committee will be responsible for the governance of quality and safe medication procurement, storage, prescribing, supply, administration and recording protocols and procedures at the facilities assigned to the Committee. The Committee will, among other duties, be responsible for determining the range, number and quantities of medications to be made available in the facility through the approval of formularies, monitor medication use, and provide guidance all health workers in the rational use of medications and the treatment guidelines that apply in the facility.'* The committee may delegate to another governance group.
2. Second Person Checks Prior to Administration (Section 7.7): *'A second person check should be used before certain medications are administered (other than by an authorised prescriber) as determined by relevant NSW Health policies and local protocols and procedures, and must include as a minimum (and in all situations where practicable):.....*
 - *Contrast administered by a radiographer, with the second person check by an authorised prescriber or registered nurse. If the person administering is an authorised prescriber or registered nurse in medical imaging, the radiographer may be the second person checking.....*

The second person checking the preparation and administration of a medication is responsible for:

 - *Confirming the identity of the patient, and*
 - *Confirming the selection of the correct medication and fluid, and*
 - *Confirming that the dose is appropriate and the calculations are correct, and*
 - *Confirming that a rate limiting device such as an infusion pump has been correctly set, and*
 - *Countersigning the administration on the medication chart against that of the administering person.*

Local protocols should include processes to confirm the suitability of individual staff members to act as a second person checking.
3. Standing Orders: Standing Orders for Routine Procedures programs can include "contrast administered by radiographers".
Local protocols should determine whether the particular procedure or program requires that an authorised prescriber must confirm the administration/supply by countersigning the record of the administration/supply.

PD2014 036 [Clinical Procedure Safety](#)

Anticipated critical events (Section 2.1.4)

The proceduralist must consider the planned procedure, critical steps, anticipated events and equipment requirements.

Procedure verification (Section 3.1.2:)

When contrast is used for procedures a combined patient checklist / consent form that is specifically designed for contrast administration must be used.

Allergy/adverse reaction check (Section 4.2.4): *the allergy / adverse reaction check must be included in a combined patient checklist / consent form that is specifically designed for contrast administration*