



Date: 20 December 2024

To: The Chief Director: Health System Digital Information

The National Department of Health, Dr AB Xuma Building, 1112 Voortrekker Road, Pretoria Townlands 351-JR, Pretoria, 0187

Email: coding@health.gov.za

RESPONSE: NOTICE OF INTENTION TO INTRODUCE HEALTH TERMINOLOGICAL SYSTEMS IN TERMS OF SECTION 74 OF THE NATIONAL HEALTH ACT 61 OF 2003 - COORDINATION OF NATIONAL HEALTH INFORMATION SYSTEMS - Notice No. 6395; GOVERNMENT GAZETTE NO. 51362; 1 OCTOBER 2024

Dear Sir/Madam,

Thank you for affording SASCI (South African Society of Cardiovascular Intervention) the opportunity to respond.

About SASCI:

SASCI, the South African Society of Cardiovascular Intervention, is affiliated to the SA Heart Association. SASCI represents Cardiologists and Allied health care practitioners with a special interest in structural and cardiovascular intervention. The society, a registered not for profit entity, acts in an advisory capacity to funders, industry, members and government on subject matters relating to interventional cardiology.

SASCI agrees with the intention to introduce the same National Health Information Systems in the South African healthcare industry, including both public and private sectors. A concise and uniform health information system will provide detailed, accurate and current patient information to ensure cost-effective and relevant treatment to all patients.

It is imperative that all stakeholders in both public and private healthcare sectors are involved in a collaborative and transparent implementation process. The “as is” in both the public and private sectors must be considered – there are significant disparities in record-keeping between the two sectors, but also within sectors, with varying levels of compliance with basic coding requirements and a plethora of software programs aimed at various types of providers, facilities and the likes. Crosswalks between, for example, NAPPI and GMDN Codes have been notoriously difficult to build and implement. NAPPI codes are, for example, not used in the public sector at all.

The resource requirements of a project of this magnitude must also be taken into consideration. System analysis with regards to the compatibility of current software systems and the cost implication of updates or acquisition of new software should be done in detail. Post-implementation system support and technical support should be included. Pre- and post-implementation training, communication,



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coding standards and the correct application of codes and coding rules to all parties involved need to be regulated by a National Coding Standards Body for South Africa.

Eight classification systems are listed in the Government Gazette, No. 51362:

a) **ICD-11: (International Classification of Diseases, 11th Revision)**

ICD-11 was endorsed by the World Health Assembly in May 2019 and came into effect on 1 January 2022. ICD-11 integrates with ICF(c) and ICHI(b).

ICD-11 report on medical advancements and technology. The free online browser will assist greatly in reducing the financial impact at a practice level when looking at continuous training post-implementation. The initial training in using ICD-11, which looks substantially different from ICD-10 and the system development to accommodate the code, remains a concern. An example of ICD-10 and ICD-11 codes for the same diagnosis is illustrated:

ICD-10 – Essential Hypertension:

- *I10 – Essential (primary) hypertension*

ICD-11 – Essential Hypertension:

- *BA00.Z – Essential hypertension, unspecified*
- *BA00.Y – Other specified essential hypertension*

It is important to take note of the process that was followed during the ICD-10 implementation period. Valuable resources and knowledge can be effectively utilised when actively improving on past lessons learnt. Furthermore, ICD-10 coding in South Africa is still sub-optimal, with incorrect coding, or no coding at all, still widespread.

b) **ICHI (International Classification of Health Interventions)**

ICHI is a data-management tool. ICHI is still in its developmental stage. A notice on the ICHI online coding tool states that **“The classification seen on this is not the released version of the classification. The content in this platform may change on an ongoing basis”** (<https://icd.who.int/dev11/Help/Get/Caveat/en>).

Medical practitioners in the private healthcare sector use RPL2006 to render accounts for reimbursement to funders and/or patients. ICHI, in its current form, is not a billing system.

By way of example, SASCI would like to illustrate an ICHI coding example:

Coronary angiogram with intravascular pressure measurement, aortography and ventriculography, thrombolysis:



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- HIA.BA.BB- Coronary angiography
- HIA.AB.AF- Intravascular pressure measurement of coronary artery
- HIF.BA.BB- Ascending aortography with contrast medium
- HIG.BA.BB- Descending thoracic aortography with contrast medium
- HIH.BA.BB- Angiography of the abdominal aorta with contrast medium
- HBA.BA.BB- Left ventriculography
- HBB.BA.BB- Right ventriculography
- HIA.DB.AF - Thrombolysis of coronary artery

The code submission for the procedure will look as follows:

HIA.BA.BB/HIA.AB.AF/HIF.BA.BB/HIG.BA.BB/HIH.BA.BB/HBA.BA.BB/HBB.BA.BB/HIA.DB.AF: **This is a 56-character code, which most current software systems do not cater for.**

In contrast, the current MDCM system would code such an event as follows:

- 1252 – Left heart catheterisation with coronary angiography (with or without biopsy)
- 3557 – Catheterisation aorta or vena cava, any level, any route, with aortogram/cavogram (Can only be billed if photo-evidence is provided)
- 5018 – On-table thrombolysis/transcatheter infusion performed in angiography suite

Pitfalls noticed in the ICHI system pertaining to medical providers:

- No RVUs (Relative Value Units) are assigned to a code, therefore it is not possible to cost one procedure versus another. The International Classification of Health Interventions (ICHI) is a framework designed primarily for health documentation, statistical reporting, as well as policymaking. It lacks relative value units or reimbursement information, because its primary purpose is to standardize and classify health interventions globally. It was not designed to facilitate financial transactions. Market demand, government subsidies and patient-specific requirements (e.g. complexity of care) influence pricing, which ICHI does not account for.
- A crosswalk between RPL (Reference Price List) codes & ICHI for cardiology is not viable. The intent of the coding rules and modifiers are lost in translation. For billing purposes, ICHI would need to be supplemented by systems that include cost and reimbursement data tailored to local healthcare markets. Coding rules to prevent unbundling must be implemented to prevent over-billing and resource wastage. Unbundling means that a procedure is broken down into its separate components and billed separately for it. Weightings have been calculated in the RVU's to accommodate procedures at a fair reimbursement for all e.g.
 - MDCM code 3557 – Catheterisation aorta or vena cava, any level any route, with aortogram/cavogram, is a single billing code. It bundles the complete aorta and vena cava into one code.

ICHI has multiple codes for this one MDCM code e.g.

- HIF.BA.BB- Ascending aortography with contrast medium
- HIG.BA.BB- Descending thoracic aortography with contrast medium



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- HIH.BA.BB- Angiography of the abdominal aorta with contrast medium
 - HIB.BA.BB - Angiography of superior vena cava
 - HIC.BA.BB - Angiography of inferior vena cava
-
- An RVU value applied to each ICHI code must be calculated per single code and as one combined code. All five ICHI codes above will crosswalk to a single MDCM code, namely 3557. Rules must be developed to enable each one of the ICHI codes to be billed on its own and without enabling over-coding and resource over-usage
 - The ICHI coding tool does not recognise multiple procedures. Singular is plural and vice versa. Should a coronary procedure be done in more than one coronary vessel, the medical practitioner should be able to code it more than once. The medical practitioner would also have costs associated with such a second procedure and not be penalized for effective treatment
 - The WHO (World Health Organisation) states that each country must decide the level of specificity of codes to be used. Not using the full level of specificity of codes, reduces the accurate data-mining capability of ICHI, which in turn will affect the accuracy of planning and budgeting for resource requirements for healthcare interventions.
 - No official training is provided by the WHO that we could source, other than an Introductory Presentation
<http://whofic.org.za/sites/default/files/2021-10/ICHITrainingMaterial.pdf>
 - There is no regulatory body with the necessary expertise currently in South Africa to manage, guide and provide training and support on ICHI for the various private sector stakeholders (i.e. those in the medical schemes environment, in the healthcare employment sector, in the private cash market) and the various public sector stakeholders (i.e. provincial departments of health, RAF, Compensation Fund, Compensation Commissioner for Occupational Diseases in Mines and Works, etc.).
 - No code exists for expensive office based medical equipment, e.g. Treadmill; Transoesophageal echocardiogram, the purchase cost (and in some cases maintenance), which have to be recovered
 - A lack of codes for consultative purposes. Currently, the medical practitioner can indicate via the billing code if an intervention was done “in-hospital” or “rooms”. Reimbursement is different per facility where the medical practitioner performs the intervention. There are currently different codes indicating an emergency vs a non-emergency. The type of facility will have an impact on the rate of reimbursement for the medical practitioner.
 - No code to indicate the level of care while a patient is admitted to hospital e.g. ICU (Intensive Care Unit), these units requiring more resources, skilled personnel, around-the-clock Health Care Provider (HCP) availability, specialised technology, etc.
 - Specific surgical procedural shortcomings. At the time of writing this letter, no ICHI code could be found for Renal Denervation. An MDCM code exists: 1300 - Renal denervation. An in-depth study, indicating the number of cardiac procedures not listed in ICHI will have to be done to establish the lack of specific ICHI codes. The lack of specific codes for these interventions could limit their use in systems relying heavily on detailed procedural data, such as national billing systems or specialized medical databases, which require exhaustive coverage of all procedures for accurate tracking and reimbursement purposes



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- Private healthcare practitioners have their own IT (Information Technology) systems. Limited space is available for code characters. It will not be possible to accommodate a “many character code” without major and costly system enhancements
- Resource and equipment limitations in public healthcare facilities, nurse-driven private primary healthcare, e.g. tablets, laptops, etc. and limitations in mobile and internet networks in certain areas.

It is important to note that the research done by Dr Sithara Satiyadev

(<https://www.researchgate.net/publication/368592451> The Public Health Value of Coding Surgery in South Africa Using the International Classification of Health Interventions)

included only general surgery interventions. The study was done to indicate the ability to use ICHI as a data-management tool and not as a billing tool in its current state, or to calculate reimbursement in future, potentially amalgamated systems. One should also bear in mind that the impact of ICHI coding will have to be tested on specialised surgery before a state of reasonable comfort can be achieved that ICHI can be used for all types of surgery and not just general surgery.

It therefore seems premature to finalise the list as published in the Gazette, without the necessary testing and pre-work having been done, including but not limited to the issues raised above in bullet format.

The development of Relative Value Units (RVUs) for current ICHI coding and the inclusion of industry agreed coding rules and modifiers will have to be developed and robustly tested before ICHI can be implemented as an activity-recording and reimbursement-level calculation or billing tool.

SASCI is of the opinion that there is a place for alternative reimbursement models in modern healthcare. That being said, it is imperative that billing data, including practice cost, are analysed correctly and transparently in order to form the base for a fair alternative reimbursement model for all parties involved.

SASCI furthermore would like to state that ICHI in its current form will not be viable to implement as a procedure coding and billing system for Interventional Cardiologists.

c) ICF (International Classification of Functioning, Disability, and Health)

The ICF can provide a descriptive profile of an individual's pattern of functioning. It will clearly indicate the level of disability, but also measuring improvement or deterioration. The level of rehabilitation required and economic implications for the patient will be accurately described.

The application of a disability score in cardiac rehabilitation will be welcomed by SASCI. Should the same systems be correctly implemented across healthcare sectors, the optimal level of rehabilitation can be agreed and funded, while the administrative burden of writing motivational letters at present should decrease. Disability scoring directly correlates with patient performance and health outcomes. An example of an ICF code is:



- d2303 Managing one's own activity level

In order to quantify the ability to manage one's own activity, the following assessments need to be performed:

Qualifier: Performance (*use additional code, if desired.*)

- **qp0** NO performance difficulty (none, absent, negligible,...) 0-4 %
- **qp1** MILD difficulty (slight, low,...) 5-24 %
- **qp2** MODERATE performance difficulty (medium, fair,...) 25-49 %
- **qp3** SEVERE performance difficulty (high, extreme,...) 50-95 %
- **qp4** COMPLETE performance difficulty (total,...) 96-100 %
- **qp8** performance difficulty, not specified
- **qp9** performance difficulty, not applicable
- Capacity (*use additional code, if desired.*)
- **qc0** NO capacity difficulty (none, absent, negligible,...) 0-4 %
- **qc1** MILD capacity difficulty (slight, low,...) 5-24 %
- **qc2** MODERATE capacity difficulty (medium, fair,...) 25-49 %
- **qc3** SEVERE capacity difficulty (high, extreme,...) 50-95 %
- **qc4** COMPLETE capacity difficulty (total,...) 96-100 %
- **qc8** capacity difficulty, not specified
- **qc9** capacity difficulty, not applicable

The incorporation of ICF coding in a cardiology practice will increase the administrative burden exponentially.

d) ATC/DDD (Anatomical Therapeutic Chemical Classification System with Defined Daily Doses)

The Anatomical Therapeutic Chemical (ATC) classification system and the Defined Daily Dose (DDD) as a measuring unit are tools for exchanging and comparing data on medicine use at international, national or local levels. The ATC/DDD system has become the gold standard for international drug utilization research. It is maintained by the WHO Collaborating Centre for Drug Statistics Methodology in Oslo, Norway

(<https://iris.who.int/bitstream/handle/10665/331059/DI294-496-502-eng.pdf?sequence=1>)

This system focuses on pharmaceutical data. It depends on the intent of the implementation and the level at which data will be captured, how it will affect Interventional Cardiologists. Medicines reimbursement and utilisation at present in the private sector are based on NAPPI codes.

The WHO ATC system is explicitly not designed for any reimbursement or cost-calculation purposes.



e) LOINC (Logical Observation Identifiers, Names, and Codes)

LOINC is a common language (a set of identifiers, names, and codes) for identifying health measurements, observations and documents. It contains measurements, including laboratory tests and vital signs, to name a few. It creates a platform for clinical results to be captured electronically, increasing data aggregation per patient. It depends on the intent of the implementation and the level at which data will be captured, how it will affect Interventional Cardiologists.

The document does not make clear how these systems will be used and deployed, or when the one, versus, or in relation to another will be used, and/or how it will function in the short, medium or longer term. This information is vital to make an informed decision regarding the impact on cardiologists.

f) SNOMED-CT (Systematized Nomenclature of Medicine Clinical Terms)

SNOMED forms part of an electronic patient record. It will convey diagnosis, procedures, symptoms, family history, allergies, assessment tools, observations in a coded format. Training, system requirements and cost remain concerns. It depends on the intent of the implementation and the level at which data will be captured, how it will affect Interventional Cardiologists.

It is again not clear how this system will be used in relation to ICHI, ICD11 and other systems. This information is vital to make an informed decision regarding the impact on cardiologists.

g) GMDN (Global Medical Device Nomenclature)

GMDN is a standardized system used to identify and classify medical devices. It consists of a unique 5-digit numerical code linked to a medical device name and a definition. Training, system requirements and cost remain concerns. It depends on the intent of the implementation and the level at which data will be captured, how it will affect Interventional Cardiologists.

The GMDN codes are, at present, a SAHPRA requirement for a device manufacturer or importer. Products without such codes can obtain them from the GMDN agency. There are tens of thousands of such codes globally (this being a global system).

Healthcare practitioners and facilities, however, are unfamiliar with these, and the codes are not affixed to any product, or available on any South African database (the data is copyrighted) or listed when products are procured. There is also significant overlap between NAPPI codes and GMDN codes.



h) NAPPI® (National Pharmaceutical Product Interface)

Listing consumables (medical devices) and medicines on healthcare record-keeping systems will ensure an accurate assessment of the cost of care, ensuring a fair and adequate remuneration for such use as part of treatment.

The NAPPI system includes both medicines and medical devices (from smaller disposables to implants and some equipment). In SASCI's understanding NAPPI is not used in the public sector (Departments of Health) at all. The extent to which it is used by RAF and the Compensation Fund is not clear.

This, again, points to the necessity to undertake some work and consultation prior to finalising the specific systems, and making clear which systems will be used for general record-keeping, for patient records, for the calculation of reimbursement levels, alternative reimbursement methodologies, etc.

The implementation of National Health Technology systems will greatly improve patient care, should all parties utilise the same platform. Funding, coding, technological, training, regulatory resources will have to be coordinated in a clear and transparent manner.

SASCI would like to extend a request that medical societies be included in the National Health Information Systems Committee. In offering the collaborative expertise of interventional cardiologists in South Africa, a smooth and transparent implementation of the National Health Technology Systems will be to the benefit of all parties involved.

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