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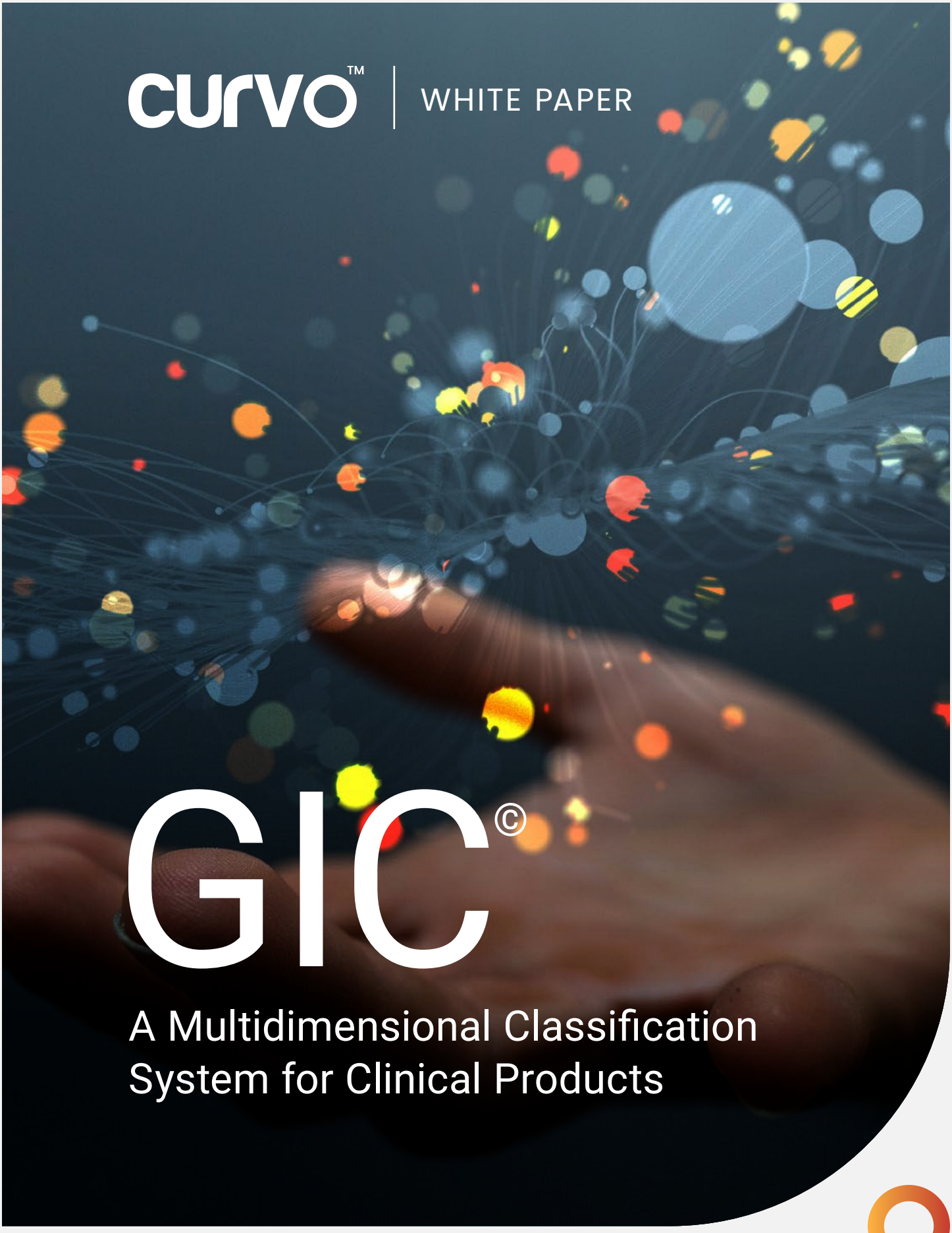

GIC©

A Multidimensional Classification System for Clinical Products

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GIC: A MULTIDIMENSIONAL CLASSIFICATION SYSTEM FOR CLINICAL PRODUCTS

What is GIC©?

SUPPLY CHAIN TEAMS RELY ON CLASSIFICATION SYSTEMS TO MORE EFFICIENTLY AND EFFECTIVELY IMPROVE PATIENT OUTCOMES WHILE ALSO IMPROVING COSTS.

The use of classifications helps with supply chain teams' category strategy as they help to compare products accurately, to quickly search a mountainous amount of data, and to align specific products to improve patient outcomes in a standardized way.

Moreover, healthcare supply chain teams utilize ***medical device classification systems*** in order to identify variables that determine the success or failure of a medical device. However, ***it is beneficial for hospitals to have more than one classification system,*** as some systems are helpful across different areas of the hospital. There are many classification systems that health systems can choose from. Five of the most common systems include the United Nations Standard Products and Services Code (UNSPSC), the Food and Drug Administration (FDA) Product Code, the Global Medical Device Nomenclature (GMDN), the Universal Medical Device Nomenclature System (UMDNS) and the Generic Implant Classification (GIC©).

The robust nature (or lack thereof) of these systems drives all other data work and analysis in the supply chain. If health systems are ***relying on classification systems that were not designed for the specificity of clinical products*** and physician preference items, then it will impact the quality of its downstream analysis.

Although other classification systems are helpful across all areas of the hospital, ***few do the hard work needed in clinical product data classification and PPI like the GIC classification does.*** Out of the several options for classifications, ***the GIC classification is considered the gold standard*** — especially as the system supports the calculation of constructs at the procedural level. Additionally, while many classification systems are only 1-2 dimensional, GIC's multidimensional system allows it to work with accuracy in clinical product data. With GIC, hospitals are able to ***compare orthopedic products in a timesaving, cost-effective way that clinicians can also trust.***

GIC's Background Story

THE GENERIC IMPLANT CLASSIFICATION, ALSO KNOWN AS GIC, WAS ORIGINALLY DEVELOPED BY STAN MENDENHALL OF ORTHOPEDIC NETWORK NEWS STARTING IN 1992. HE CREATED IT SPECIFICALLY FOR MEDICAL DEVICES.

Before developing this system, Stan was often receiving price lists from hospitals and realized that in order to compare different implant systems effectively, he had to develop an efficient way to group the implants together.

Stan started with IMS America, a market research firm based in Plymouth Meeting, PA, in which he adapted and modified to develop GIC — which was predominantly designed for hip and knee implants, then expanded to shoulder and spinal implants, and instruments. Orthopedics account for most of these medical devices. **Now, GIC has expanded beyond orthopedics — into the areas of cardiovascular, general surgery, and more.**

Stan Mendenhall

ORTHOPEDIC NETWORK NEWS

GIC as a Multidimensional Classification System

Compared to the UNSPSC or GMDN, which do not accommodate product specificity well, GIC is a multidimensional classification system which is beneficial for classifying clinical products.

EACH COMPONENT IS ASSIGNED A GIC CODE, AND ICONS ARE PROVIDED TO CREATE A VISUAL LINK TO THE PRODUCT OR DEVICE. COMPONENTS CAN ALSO BE SUBCLASSIFIED TO ADD GREATER SPECIFICITY.

GIC classifications are multidimensional, which means that it has multiple levels of classifications, as they are sorted between Type 1 and Type 2, which are called "subclassifications," as noted in the image below. As such, GIC codes can be sub-classified to account for specific technologies – which are categorized as Type 1. Additionally, these Type 1 categories can be further categorized if necessary, such as "Stem," "Body," "1 Piece", and "Temp" – which are considered as Type 2.

GICs are also very specific in their numerical codes. When necessary, the major materials of devices are labeled as a two-digit code. However, for some devices, this material is not relevant and is not labeled. Additionally, component sizes are also recorded when relevant. There are three separate sizes available for each part. Sizes are not always relevant for all devices — such as implanted simulators. Overall, these **logical groupings make it easier for supply chain teams to obtain the necessary data.**

List Of GIC Codes

The GIC™ Classification of Medical Devices

Segment/Icon/GIC/Description

SHOULDER REPLACEMENTS

11 Shoulder humerus

12 Shoulder head

13 Shoulder glenoid, other

EXTREMITY REPLACEMENTS

14 Digit

15 Ankle

16 Wrist

17 Elbow

HIP REPLACEMENTS

21 Hip femur

22 Femoral head

23 Acetabular cup/shell

24 Acetabular liner

29 Other hip components

KNEE REPLACEMENTS

31 Knee femur

32 Knee tibial base

33 Tibial insert

34 Patella

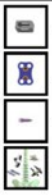
39 Other knee component

SPINAL IMPLANTS

41 Spinal rod

42 Pedicle/facet screw

43 Pedicle screw/rod component



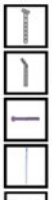
44 Interbody fusion device

45 Spinal plate

46 Spine plate screw

49 Other spinal implant

TRAUMA DEVICES



51 Trauma plate

52 Hip screw

53 Trauma screw

54 Intramedullary nail

55 External fixator

56 Soft tissue attachments

59 Other internal fixation

BIOLOGICS/STIMULATORS

61 Bone cement

62 Bone, tissue, biologics

63 Implanted stimulator/pump

OTHER DEVICES/SERVICES

70 Loaner fees

71 Freight

72 Non implanted disposables

73 Instruments

74 Soft goods

96 Procedure assembly

98 Non-ortho devices

Elements of GIC Classification

Each manufactured component is assigned a GIC code. Icons are provided to create a visual link to what the device is. There is a dark border around the icon which identifies it as a "generic" picture. This may not be what the actual device looks like.

The GIC codes may be subclassified for specific technologies. For example, GIC 21 (Hip femur) is subclassified into "Coated", "Uncoated", "Revision', "1 piece", and "Endo" categories designated as Type1.

The Type1 categories may be further subdivided as necessary. For example, the GIC category of 21 (Hip femur), Type1 Revision, is subdivided into "Stem","Body","1 Piece", and "Temp".

When possible and necessary, the major material of the devices are determined and entered as a two-digit code. For example, a hip stem made out of cobalt chromium alloy would have a material code of "CC". For some devices, the material is not relevant.

Component sizes are also recorded when possible and necessary. Three separate sizes are maintained for each part and the sizes mean the same thing for each GIC. For example, the outside diameter of a femoral head is designated as Size1 for GIC 22. For trauma plates, Size1 corresponds to length of the plate, Size2 is hole diameter of the plate, and Size3 is the number of holes in the plate. For some devices, such as implanted stimulators, sizes are not relevant.

Sample GIC™, Type1, Type2, Material, Size1 Assignment

Stryker part 6276-7-016 Modular Conical distal stem 16x155:

GIC:	21 Femoral stem
Type1:	Revision
Type2:	Stem
Material:	TI (titanium)
Size1:	155 (Length)

A Classification System that Evolves with New Medical Devices

THE GIC CLASSIFICATION AND ASSIGNMENT OF GICS TO NEW DEVICES IS AN ONGOING EFFORT. WHEN NEW TECHNOLOGIES ARE DEVELOPED, OFTEN THE GIC CLASSIFICATION MUST BE MODIFIED TO ACCOMMODATE THESE CHANGES, SUCH AS WHAT HAPPENED AFTER GROWTH NAILS WERE INTRODUCED.

With **over one million parts from over 1,000 suppliers**, there will be mis-classifications, and as a result, the classifications are periodically reviewed and adjusted. They are also modified when problems are noted with our clients. With over 30 years of data and experience, the GIC classification system is robust and comprehensive.

Orthopedic News Network (ONN) is a great resource for further reading on this topic with quarterly issues on trends in spine, trauma, hips and knees, and extremities. You can also try out our Lookup tool with a two week free trial, which allows supply chain and value analysis teams to research clinical products by GIC.

Ways to Leverage GIC

Medical device classifications systems, such as the Generic Implant Classification (GIC)©, are an important tool for healthcare supply chain teams. They help teams **compare clinical products and identify variables that determine what drives the success or failure of certain products.**

GIC IS CONSIDERED THE GOLD STANDARD BECAUSE OF ITS HIGH ACCURACY WITH CLINICAL PRODUCT DATA DUE TO ITS MULTIDIMENSIONAL NATURE.

Built with surgeons and clinicians, GIC enables healthcare supply chain teams to efficiently sort through a significant amount of data in a standardized way, improving utilization, increasing savings opportunities, reducing practice pattern variation and, ultimately fueling data and insights that can help improve patient outcomes.

One additional benefit of leveraging the GIC classification in healthcare systems is an often **seamless integration.** GIC is additive and can be implemented into existing data initiatives easily, with minimal time required from the supply chain team, while quickly driving improved insights from other analytical tools and investments.

WAYS TO LEVERAGE GIC

01. HAVING APPLES-TO-APPLES DISCUSSIONS WITH CLINICIANS

A powerful benefit of using the GIC classification is that the healthcare supply chain team, as well as surgeons and other clinicians, can all be on the same page when it comes to describing and comparing the medical devices at hand. Having a standard classification for the devices used within the health system makes it possible for the various groups within the system to have an apples-to-apples comparison of clinical products and components.

FOR EXAMPLE, *if you are a surgeon and look at a product coming from the supply chain, you know which products do the same thing or have the same material or size, and those that do not. As such, you are able to look at market benchmark prices and utilization in a more clinically relevant way and have conversations between supply chain and clinicians in which you are all speaking the same language. The ability to have conversations like this is the foundation of a clinically integrated supply chain and unlocks the potential to truly impact the patient value equation.*

On the clinical side, the construct and procedural levels that come on top of the **GIC classification system are the next level of data quality and validity,** which can significantly improve clinical utilization analysis.

WAYS TO LEVERAGE GIC

02. ENRICHING FOR MASTER DATA MANAGEMENT

Once your organization implements GIC enrichments, one area that is important to consider is master data management, which is the ability to input the GIC enrichment and values for various products into the item master. This is especially important as it makes it possible for teams to **pull reports and generate details that are accurate, consistent, and relevant to the organization.**

FOR EXAMPLE, *if a physician needs information on pedicle screws or a sourcing team is looking for background on total joints, the supply chain team can quickly share detailed information about those products that can help their colleagues make informed decisions which can, ultimately, help improve patient care.*

QUALITY MASTER DATA MANAGEMENT UNLOCKS THE POTENTIAL AROUND CROSS REFERENCES AND SUBS, FUELS DATA WAREHOUSE INITIATIVES, AND ALLOWS FOR CONSTRUCT ANALYSIS IN CHALLENGING CLINICAL CATEGORIES.

There is value on the sourcing side, as well. For example, when considering a contract from a vendor, you can obtain the enrichment values to be able to fully understand what vendors are providing to you. This equips the supply chain team with the information they need to have a confident discussion with a vendor about the value they are providing and to make an informed decision about the product.

Improving the master data through GIC enrichments can reduce manual data work cross functionally in the organization. Having quality, accurate and reliable GIC-enriched source data can reduce the need for manual intervention to resolve errors. And, with these stronger classifications, **providers can see higher match rates on their item master than ever before.**

GIC can also be important for organizations that submit their data to registries in order to **track patients and outcomes over time.** Having the GIC classification as the epicenter of this process makes it easy to see the links between devices, patient outcomes and business metrics.

FOR EXAMPLE, *if you want to know the infection rates of a particular device, you can find the link between registry data and clinical outcomes data on a macro basis and track that against your supply spend. As healthcare supply chain teams begin leveraging GIC classifications, they will be able to unlock the true power of their data.*

WAYS TO LEVERAGE GIC

03. IMPROVING ACCURACY OF BILL-ONLY PROCESSES

This data can also help streamline your organization's bill-only process, where accuracy is typically a challenge. Because of its high accuracy and powerful construct logic and validations, GIC classification can add the clarity that providers need to the bill-only process.

When you have GIC classification at the root of all medical devices and components, you can easily build the logic of how they will reasonably come together, so that you are able to analyze the procedure as a whole.

FOR EXAMPLE, *this allows you to more accurately flag and answer questions such as: Am I paying on contract with this particular vendor? What parts of this procedure do not fit what is on the bill?*

Unlocking the Power of Data

Coordination across the health system is key for any initiative intended to improve the quality and value of patient care. When these initiatives involve extracting insights from clinical supply data, it's essential that everyone involved uses a standardized approach to categorize, assess and manage that data.

THE GIC CLASSIFICATION SYSTEM CAN BE AN IMPORTANT TOOL FOR IMPROVING THE ACCURACY OF DATA, WHICH SAVES A SUBSTANTIAL AMOUNT OF TIME ACROSS THE SYSTEM AND ULTIMATELY MAKES THE DATA MORE USEFUL FOR CLINICAL AND SUPPLY CHAIN TEAMS ALIKE.

Selecting The Right Medical Device Classification System

In order to find out which medical device classification systems is the best for your hospital supply chain's unique needs, we need to compare their pros and cons. In the article selecting the right medical device classification system, we examine the **5 most commonly used systems.**

Below is an excerpt of our closer look at UNSPSC. For continuity, we'll examine the different classifications for the same product: An orthopedic bone screw from Depuy Synthes 02.118.522.

CLASSIFICATION SYSTEM: UNSPSC

UNSPSC, otherwise known as the United Nations Standard Products and Services Code, is a taxonomy for products and services in eCommerce. This system works well for most items that can be purchased as it has a built-in hierarchy, which is a huge plus. Each time two digits are added to the original two, it provides a deeper level of classification. As the UNSPSC classification system is widely used in eCommerce, it's used for almost everything that can be purchased.

Let's take a look at how UNSPSC supports our orthopedic bone screw example: 42321506 - Bone screws or pegs

OUR CONCLUSION: Unlike the other systems we'll compare, the UNSPSC system was not designed specifically for medical devices and is not robust enough to support the intricate needs of medical devices. This can pose significant risks, such as not being able to determine the critical details of each item. We discussed the risks in more detail in a recent article and shared why relying on a UNSPSC classification for medical devices can be problematic for supply chain teams.