NATHEALTH
Healthcare Federation of India

APACMed
The voice of MedTech

Value Based Procurement in MedTech

Building Blocks for Enabling Implementation in India

February 2022

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Section 1 Executive Summary

Executive summary

Value Based Procurement (VBP) is a method in which procurement decisions are made focused on total value rather than cost. In doing this, VBP focuses on how a product or solution can best deliver desired outcomes, reduce the total cost of care, and provide long term benefits to all the stakeholders in the healthcare ecosystem, rather than focusing exclusively on initial cost, which is usually equated to price.

Standard procurement, in contrast, typically focuses on lowest cost. VBP, however, proposes to look at multiple aspects of value, instead of focusing primarily on the product's up-front cost.

VBP is enabled by agreements between manufacturers and purchasers (providers, commercial payers, governments) or even patients themselves. While these arrangements can take the form of risk sharing, which commits payers, providers, and manufacturers to share benefits and risk with the goal of providing desired clinical/health outcomes for patients while overcoming existing uncertainty about clinical or economic value. However, they can also take the form of more basic agreements that embed value-based criteria and better, transparent dialogue with industry into the bidding criteria and processes themselves. Over the years VBP has evolved globally and many countries in certain geographies have adopted the concepts of VBP for their MedTech procurement requirements.

In the Indian healthcare system, both the public and private sector have different models of MedTech procurement. In the public sector, qualification is based on technical specifications and the final decision is based on the lowest commercial quotation.

The providers in the private sector use various elements of cost benefit analysis to assess the value in MedTech procurement which currently focuses on cost saving.

VBP implementation in India faces certain challenges, such as like low awareness, high out of pocket expenses, lack of data on clinical outcomes, lack of capability in the procurement team to assess value, and the lack of incentivization for delivering the best outcomes and overall patient and user experience.

The suggested VBP framework can be used to comprehensively assess patient outcomes, stakeholder benefits, access to care, long-term relevance, and lifecycle costs. Both public or private providers should be able to customize the framework parameters and elements according to their needs.

A comprehensive approach is best advised going forward, with engagement of all key stakeholders. This would include the Government, MedTech companies, healthcare providers and the payors. Collaboration among these stakeholders is the key to successful implementation of VBP in India.

Section 2 VBP as a concept

While the definition of “value” may often be procurer specific and subjective, value can be defined as desired outcomes related to the costs incurred

What is VALUE?

While value can be specific to the product / solution, its market, its purpose of use, and its details can be defined differently to different procurers

VALUE is defined as the DESIRED OUTCOMES relative to the COST

DESIRED OUT-COMES

- Improved patient care outcomes
- Improved patient and user safety
- Improved patient and user experience
- Reduced cost of care
- Quality and sustainability
- Manufacturer’s life-cycle support

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Costs incurred to procure the product / solution across its life-cycle:

Transport, installation, training, operations, maintenance, upgrade, and disposal costs

COST

Value focuses on **spending well, as well as spending lesser in the medium / long term**

Value is **not merely about cost**, but about the broader **patient health and ecosystem benefits**

Value assessment brings **clinical and experiential factors** on an **equal footing with cost factors**

Sources: https://www.advamed.org/wp-content/uploads/2021/09/Good-Practices-for-Procurement-Innovative-Medical-Technology-Barcelona.pdf
https://partners.aic.sg/sites/aicassets/AssetGallery/NSPH2016/Keynote%20-%20Value-Based%20Healthcare_Prof%20Michael%20Porter.pdf

Hence, the concept of “Value Based Procurement” proposes a holistic approach to procurement with an end-to-end outlook, encompassing multiple aspects

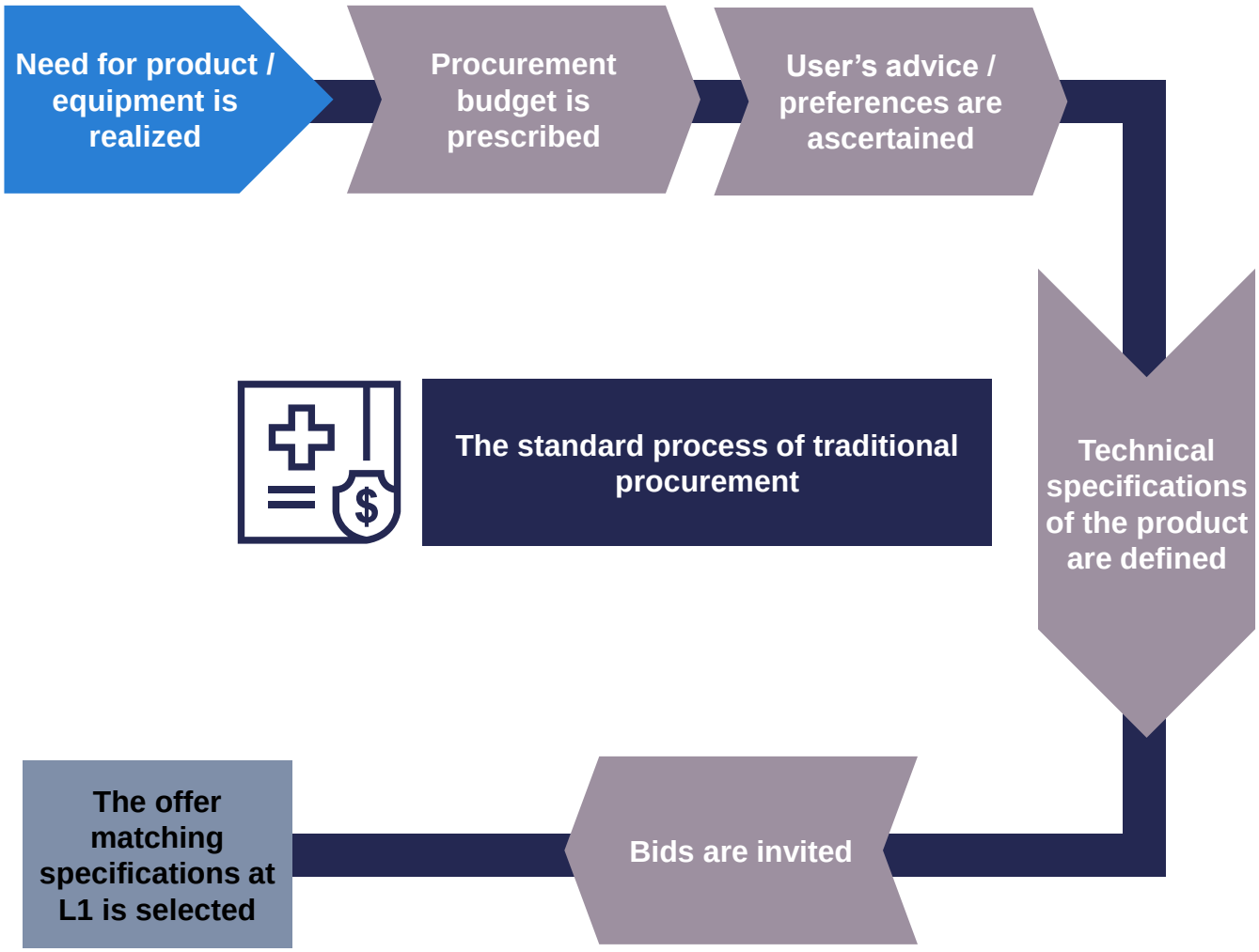
What is VALUE BASED PROCUREMENT (VBP)?

VBP entails making purchasing decisions that consider how a product or solution can best deliver the predefined outcomes and reduce the total cost of care, rather than focusing exclusively on purchasing a specific product at the lowest possible price

Procurement perspective	Procurement of a product	Procurement of a solution
Even a **product/ solution with** a **high initial price can result in savings** when its overall economic, clinical, social and societal context are considered	More **focus on the effect** of the **purchase** rather than the cost of the item itself – **instead of buying inputs, the focus should be on outcomes**	**Targeting care outcomes** as the basis for awarding tenders. Involves the **procurement of all tools and value-added services that are necessary to manage a given disease,** rather than the procurement of only one tool or one service

Sources: https://www.advamed.org/wp-content/uploads/2021/09/Good-Practices-for-Procurement-Innovative-Medical-Technology-Barcelona.pdf, Primary interviews

Traditionally, procurement in healthcare largely follows a standard chain of events where lowest cost "L1" is the determining factor among competing bids



Stakeholder insight	"The qualitative & quantitative aspects of patient outcomes are rarely evaluated in traditional procurement. The focus is on technical specifications and cost aspects"

Source: Primary interviews; *This process is commonly followed for public procurement in most countries

Although standard L1 procurement is the prevalent model, it has inherent limitations in terms of the inputs, the processes, as well as the outputs

Escalating costs

According to Eurostat, **health care delivery costs are rising disproportionately** across the European Union and make up **~70% of the total health care spend** as seen over a ten-year period

Silos in the ecosystem

Procurement today **does not** necessarily **consider patient outcomes, comprehensive stakeholder involvement** and **other costs** outside the procurement budget

Shortsighted procurement perspectives

The **focus on lowest price-**based procurement **leads to higher total costs** due to **low quality, breakdowns and lack of user friendliness**

Variability in patient outcomes

Even highly developed Organisation for Economic Co-operation and Development countries show a high level of variations in routine treatment modalities like:

- **~36x variation** in capsule complications after cataract surgery in a Swedish hospital
- **18x variation** in reoperation rates after hip surgery in a German hospital

Through its salient features, VBP proposes to address these limitations

Sources: Secondary research and primary interviews

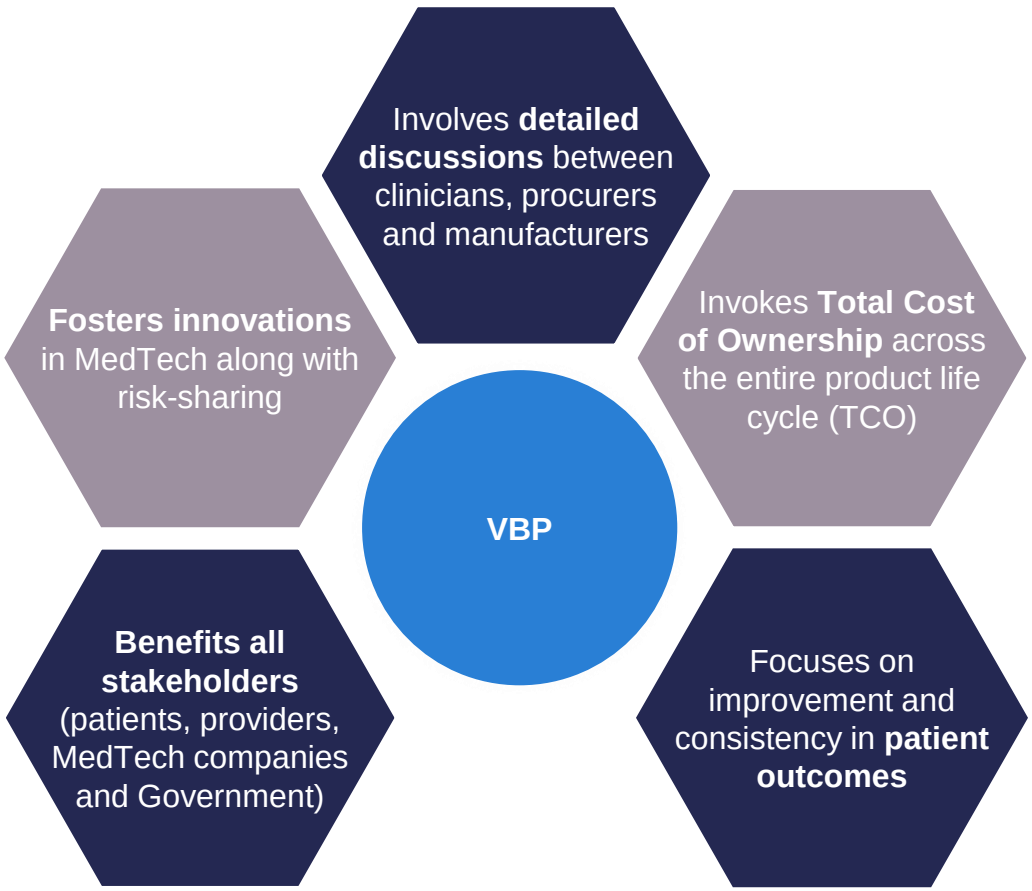
VBP, however, looks at multiple aspects of value such as patient outcomes, stakeholder benefits, sustainability and total cost of ownership (TCO)

	Standard Procurement	Value Based Procurement
Perspective 	• Direct **attention on the product/service** itself • **Specifications** of the product/service	• Focus on **enhanced desired outcomes** • **End to end life-cycle** of the product/service
Bid evaluation 	• **Lowest Price (L1)** is the main/**major criterion**	• Looks **not only at commercials**, but also at **qualitative aspects and outcome impact** of the product/service
Influencers 	• Physicians: **opinion** driven • Procurement team: heavy **bargaining and risk spreading, ensuring lowest cost**	• **Data and Outcome driven**. Outcomes relevant to **all key stakeholders-** providers (including physicians, nurses/paramedics), patients, payors • All relevant **stakeholder capabilities** are leveraged
Cost weightage 	• **Reducing** the (**up-front**) purchase **price** • **Partial utilization of the planned budget**	• Management of **total cost of ownership** • **Optimal utilization** of planned **budget**
Purchase strategy 	• Purchase strategy is **'minimizing costs'** with little or consideration of benefits or outcomes	• **Alignment with** healthcare providers **objective** and pain points • **Sustained cost benefits** across the life-cycle
Output 	• **The isolated product at minimum cost isolated product at minimum cost,** not factoring in already invested resources (in case of capital equipment's)	• **A comprehensive solution that improves outcomes** • **Management of total cost of ownership and care delivery**

Sources: https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-hbax.pdf

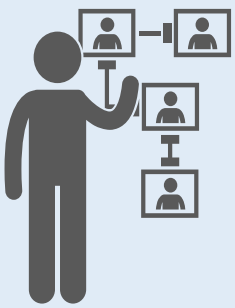
VBP looks at the entire chain of operations from procurement planning to product disposal and allows involvement of all relevant stakeholders

The practice of Value Based Procurement (VBP) evaluates potential new products, services, and solutions to maximize the overall value for money, rather than focusing only on the lowest purchase price



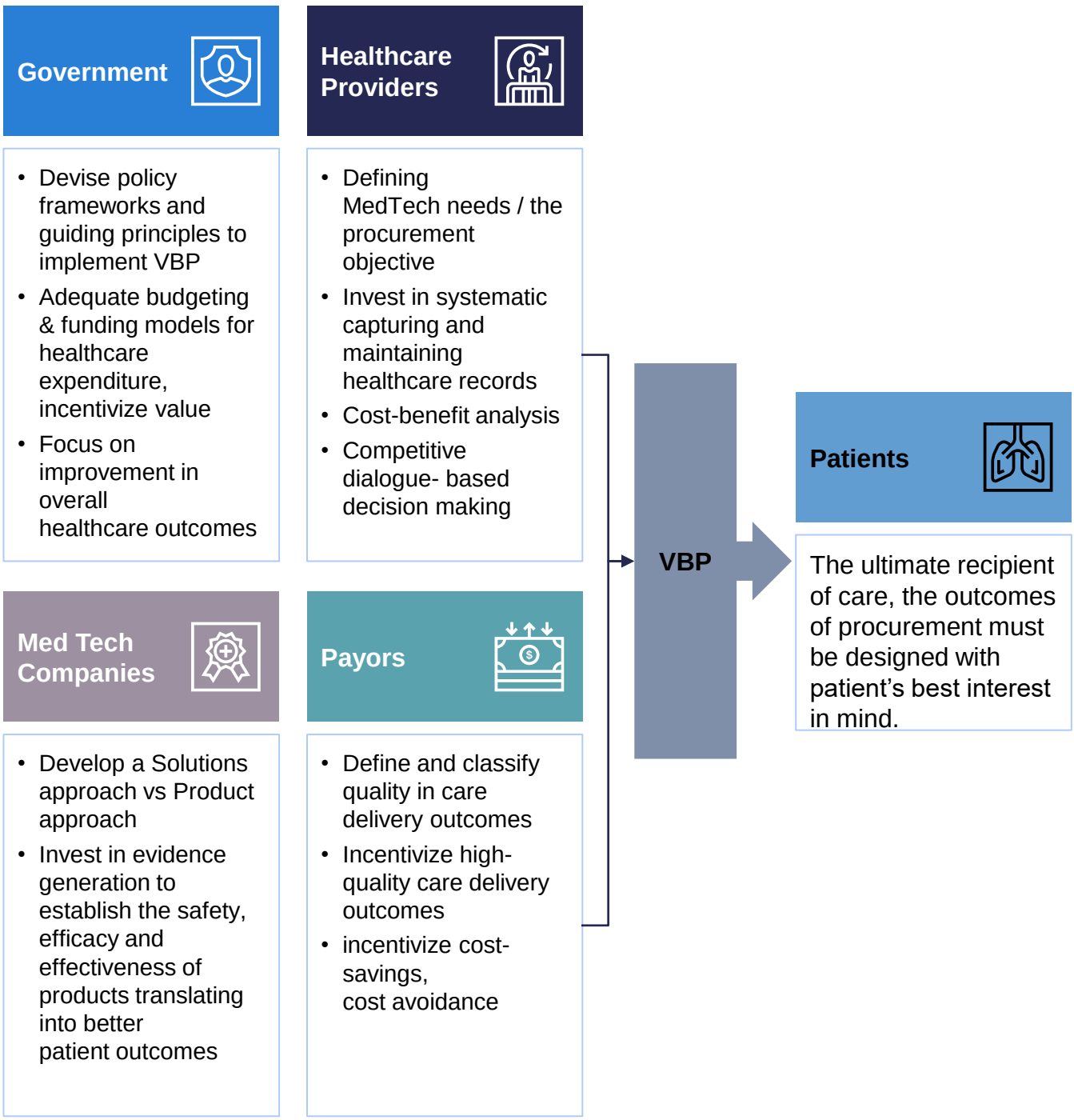
VBP offers long term clinical and financial benefits from a more holistic perspective;

VBP includes transparent, relevant, and objective measures that incorporate the right set of selection and awarding criteria, and consider the needs of patients, HCPs, and system managers. It also reflects realistic evidence requirements.



Sources: Secondary research, Primary interviews

The Government (regulators), healthcare providers (procurers) MedTech companies (manufacturers), as well as the Payors have vital roles to play in VBP implementation to ultimately benefit patient care



Sources: Secondary research, Primary interviews

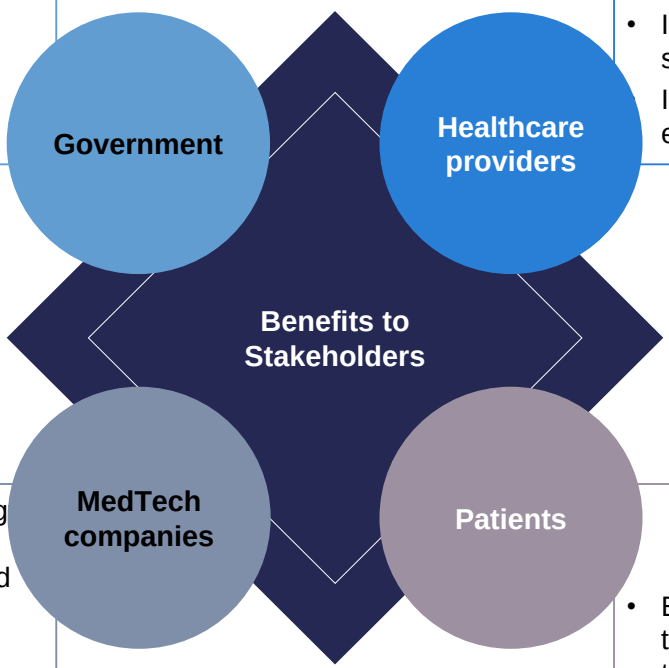
The stakeholders involved in the VBP process have the opportunity of reaping relevant benefits in terms of desired outcomes, this in turn facilitates a healthier healthcare ecosystem

Government

- Reduced overall spend on MedTech procurement
- Improved public health infrastructure
- Improved patient outcomes
- Improved community health indicators
- Increased accessibility for the population to diagnostics and faster treatment
- Reduced expenditure through risk sharing

Healthcare providers

- Improved quality of care
- Reduced variability in patient outcomes
- Reduced cost of complications through high quality equipment and risk sharing agreements
- More comprehensive solutions
- Improved clinician and staff safety & education
- Improved workflow efficiency & reduced error



MedTech companies

- Increased and meaning opportunities for innovative products and solutions
- Higher win rate & price realizations
- Stronger partnerships with providers
- Perceived as a part of the caregiver team
- Improved visibility to attract funding for product research & development
- Increased public health impact

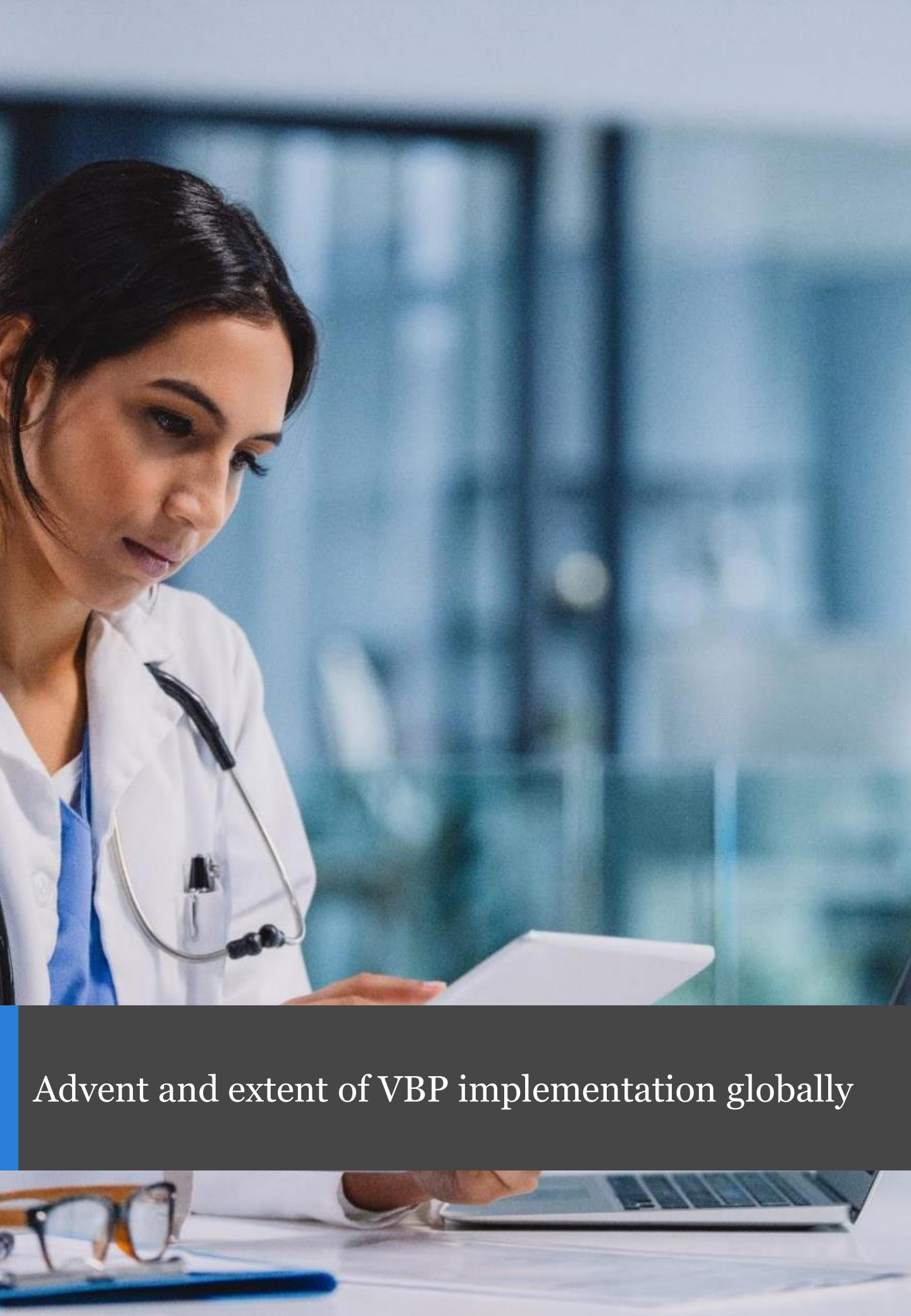
Patients

- Easier and faster access to diagnosis and treatment
- Improved quality of life
- Improved care experience & outcomes
- Reduced length of stay
- Reduced invasiveness of procedures
- Improved patient satisfaction
- Reduced cost of care

Sources: Secondary research, Primary interviews

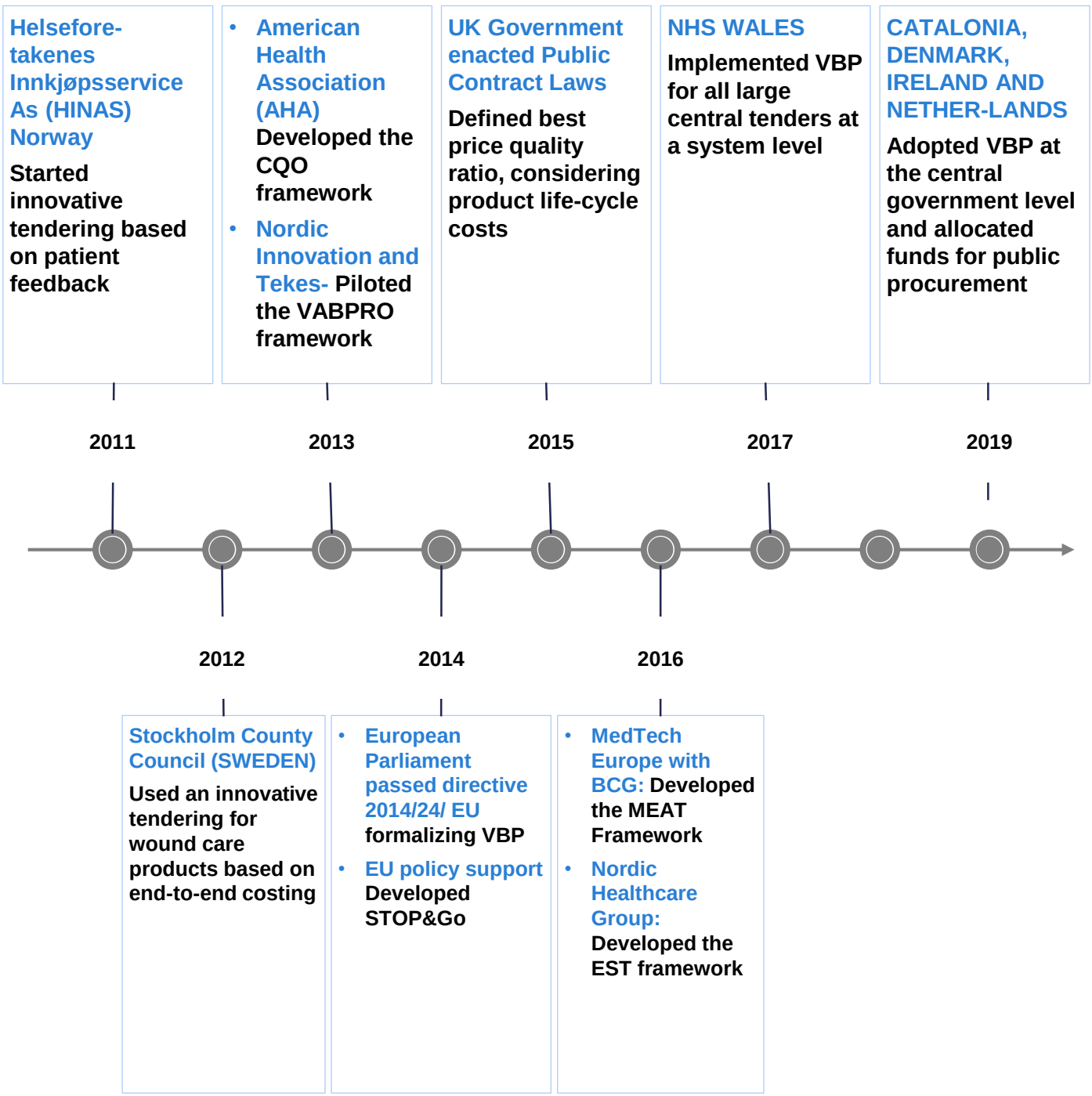
Section 3

VBP in the global landscape



Advent and extent of VBP implementation globally

Over time, VBP has seen an uptake in multiple countries…



Sources: Secondary research

…though the intensity has varied across geographies

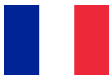
Frontrunners


UK **Norway**


Sweden **Denmark**

Canada

Followers




France **Italy**


Netherlands **Spain**


USA **Uruguay**

Implementation of VBP in developing countries has witnessed a slower uptake due to reasons such as lack of awareness and lower stakeholder capability.

- Basic versions of innovative procurement started in ~2011 in small pockets around Europe
- The American Health Association (AHA) developed the Cost, Quality and Outcomes (CQO) framework for VBP in 2013
- The EU directive in 2014 on VBP was a defining milestone which proposed the formal implementation of VBP in public procurement by 2016. The actual implementation began in 2017-2018

Sources: Secondary research

The EU directive on MedTech procurement in 2014 was a major impetus as it proposed formalized implementation of VBP in public procurement at the national level

EU directive: Article 67
Subsection 3, Award of the Contract
Article 67, Contract-Award Criteria

The **Most Economically Advantageous Tender (MEAT)** from the point of view of the contracting authority shall be identified on the basis of price or cost, using a **cost-effectiveness approach**, such as **life-cycle costing** in accordance with Article 68, and may include the **best price-quality ratio**, which shall be assessed on the basis of **criteria**, including **qualitative, environmental, and/or social aspects**, linked to the subject matter of the public contract in question

Public bodies can procure based on value in terms of qualitative and financial benefits to all stakeholders, not just on price

EU directive: Article 68
Subsection 3, Award of the Contract
Article 68, Life-cycle Costing

Life cycle costing shall to the extent relevant cover parts, or all of the following **costs over the life cycle** of a product, service, or works:

- Costs related to **acquisition**
- **Costs of use**, such as consumption of **energy and other resources**
- **Maintenance** costs
- **End-of-life** costs
- Costs imputed to **environmental externalities**

Procurers can ask MedTech players to provide life-cycle costing calculations for making an objective assessment

Additionally, the directive mandated that all member states make VBP into a national law by 2016

Sources: Secondary research

Typical process and frameworks for VBP implementation

The following are the broad steps in the VBP process

1 Defining desired outcomes and evaluation criteria in the tender

- **Review of current and historic patient, user and procurer outcomes** with the current item
- Documentation of **desired patient outcomes and outcome-based specifications**
- Documentation of **technical specifications**
- **Collaborative discussion between key stakeholders:** users (clinicians, nurses etc.),
- Define the **product/ solution evaluation** and **vendor selection criteria** comprehensively in the **tender document**
- **Float the tender in the public domain**

2 Competitive dialogue and shortlisting the closest matches

- Review of **available offerings including innovations**
- Review of **research-based outcomes data** on the offerings
- **Competitive dialogue** with MedTech companies based on desired outcomes
- Analysis of proposed **patient, user and ecosystem benefits** including **return on investment**
- **Invite bids from the shortlisted vendors that** match the desired outcomes
- **Pilot usage of shortlisted products / solutions with documentation** of patient, user and ecosystem outcomes

3 Cost & benefit analysis through VBP framework

VBP framework typically consists of the following parameters:

Cost parameters

- Analysis of Total Cost Of Ownership (TCO) for the shortlisted offerings

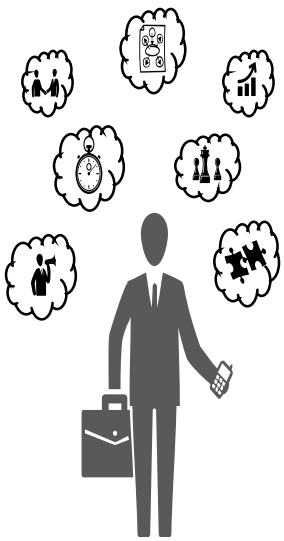
Outcome parameters

- Evidence of outcomes
- Risk-sharing
- Safety/convenience for patients and users
- Tech support and operational maintenance for providers
- Innovativeness
- Healthcare ecosystem benefits
- Sustainability & environmental impact

Select the vendor / offering with the most value through **Outcome vs Cost**

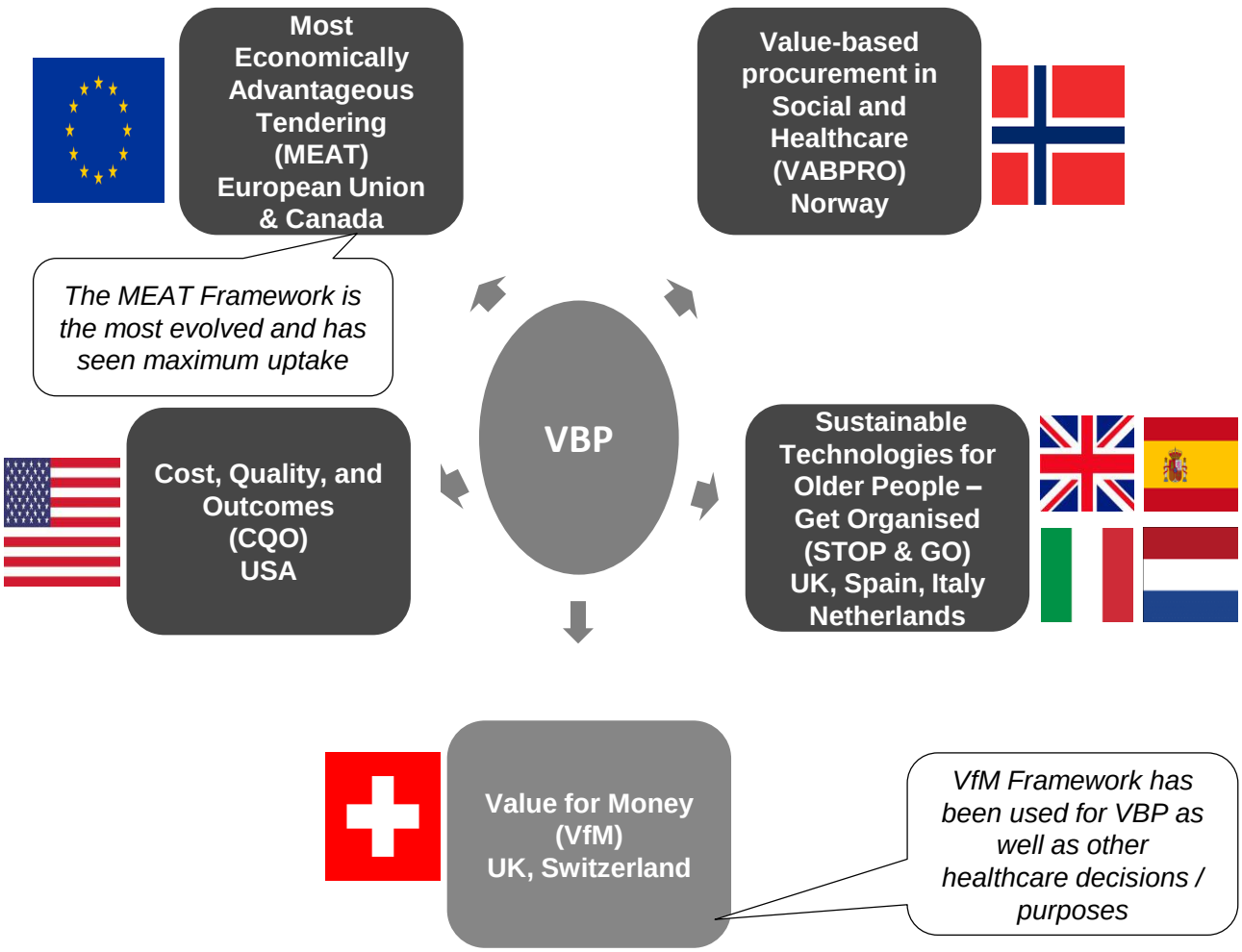
4 Awarding the tender & maximizing the value proposition mutually

- **Rediscuss critical aspects of the tender with the winning bidder** to maximize value including **outcomes and user satisfaction**
- **Award the tender**
- **Jointly plan further steps for the product / solution lifecycle**



Sources: Primary interviews, Secondary research

Multiple Value Based Procurement frameworks have been used in MedTech procurement globally



Sources: Secondary research

Cost, Quality & Outcomes framework (CQO)

Parameter	Details
Inception	**January 2013**
Governance	**Association for Health Care Resource & Materials Management (AHRMM)** of the American Hospital Association
Location	Major focus on **United States of America**
Salient features	The AHRMM Cost, Quality, and Outcomes (CQO) refers to the intersection of cost, quality and outcomes and a **more holistic view of the correlation between**: • **Cost**: All costs associated with **delivering patient care** and **supporting the care environment** especially supply chain costs • **Quality: Patient-centered care** aimed at achieving the **best possible clinical outcomes** • **Outcomes: Financial reimbursement** driven by outstanding clinical care at the appropriate costs as instead of viewing each independently

Value Based Procurement in Social and Healthcare (VABPRO)

Parameter	Details
Inception	Between **March 2013** and **December 2014**
Governance	The project was funded by Nordic Innovation and Tekes, the Finnish Funding Agency for Technology and Innovation
Location	Focus on **Norway, Denmark and Finland**
Salient features	VABPRO seeks to **promote value overlapping with outcome through the following:** • An **innovative procurement process design** • Considering both the **manufacturer perspective as well as the user/patient perspective** • A **dialogue with users/patients** on their **needs and requirements** to reach a thorough understanding of their perception of value • **User driven innovation** methodology

Sources: https://www.ahrmm.org/cqo-movement/what-is-cqo, : https://nhg.fi/vabpro/20150215_VABPRO_presentation.pdf

Sustainable Technologies for Older People – Get Organized (STOPandGO)

Parameter	Details
Inception	Launched in **April 2014 and was under implementation for four years**
Governance	A **Public Procurement of Innovative Solutions pilot project funded by the Information and Communication Technologies Policy Support Programme** as part of the Competitiveness and Innovation Framework Programme of the **EU**
Location	Focus on **11 geographies** in **four countries** (**Italy, Spain, UK, and the Netherlands**) with a budget of 17 million euros
Salient features	A **service deployment project** with the following features: • **Focused on procurement as a solution** • **R**edesigned the model of care to **include technology as an integral part of the service and looked at integration and the simultaneous improvement** of models of care and cure **rather than utilizing specific products or technological components** • Focused on providing **innovative solutions for elderly care**

Most Economically Advantageous Tendering (MEAT)

MEAT Framework is the most recent tool. The weightage for parameters in the framework is flexible and is left for providers and procurers to deliberate and define

Parameter	Details
Inception	**March 2016**
Governance	MedTech Europe, in partnership with The Boston Consulting Group (BCG) and procurement experts
Location	Currently EU
Salient features	The Most Economically Advantageous Tender (MEAT) criterion enables the contracting authority to take account of **criteria that reflect qualitative, technical and sustainable aspects of the tender submission as well as price** through a **three-layered assessment framework**: • **Core Layer:** Patient outcomes over costs (looks for improved outcomes at reduced costs) • **2nd Layer:** Other benefits for key stakeholders (like patients, hospital, staff and the ecosystem) • **3rd Layer:** Broader impact on society (Sustainability, socioeconomic impact and innovation)

Sources:https://www.ingentaconnect.com/contentone/sil/impact/2017/00002017/00000006/art00034?crawler=true&mimetype=application/pdf, https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-hbax.pdf

Value for Money (VfM)

Department for International Development

THE WORLD BANK IBRD • IDA

THE ACCESS AND DELIVERY PARTNERSHIP

Parameter	Details
Inception	**July 2011, reformed in November 2019 and June 2020**
Governance	**Originally by the UK Department for International Development; further development by "The Global Fund Geneva" Switzerland**
Location	Ethiopia, Malawi, Tanzania, Zimbabwe, Kenya, Sudan, Thailand, and other developing countries
Salient features	VfM is a concept that defines how to maximize and sustain equitable and quality health outputs, outcomes, and impact for the given level of resources. **VFM evaluation framework can be subjective; however, it typically considers five key elements.** • **Economy**: Does the equipment provide the required health services at the lowest TCO? • **Effectiveness**: Can the equipment effectively contribute to better health outcomes? • **Efficiency**: Does the equipment / service model maximize patient, clinician, or health system benefits relative • to equipment or service alternatives? • **Equity**: Does the equipment support the health needs of all populations? • **Sustainability**: Can a health facility, program, or system maintain the equipment / service model over the long-term?

Sources: Value-based procurement of medical equipment, The Access and Delivery Partnership (ADP), June 2020;
https://www.theglobalfund.org/media/8596/core_valueformoney_technicalbrief_en.pdf?u=637169196780000000
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf

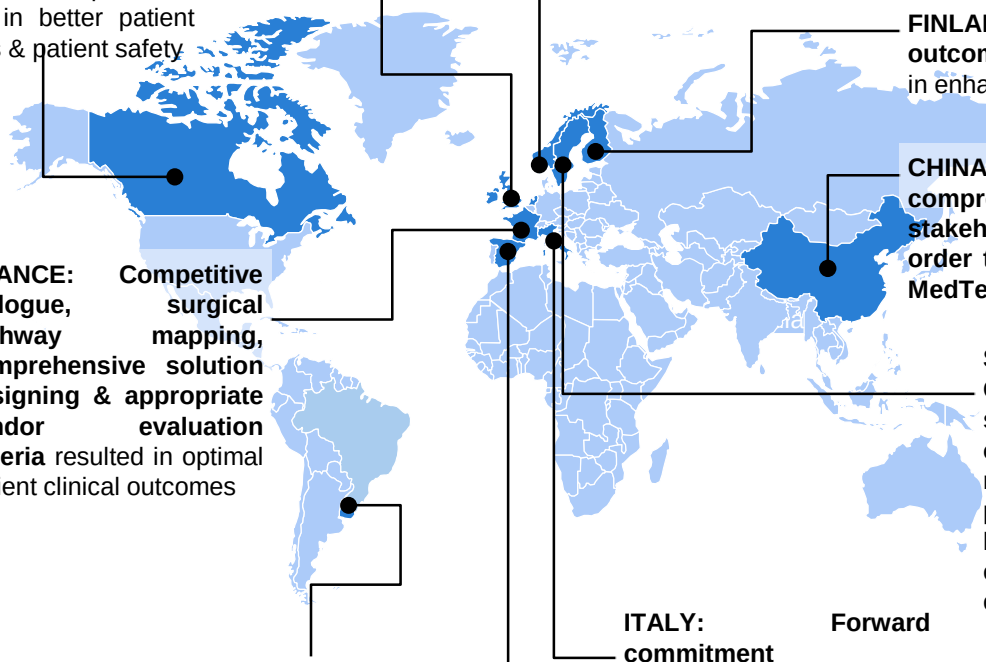
While all frameworks focus on evaluating outcomes in relation to costs, the relevant parameters and their importance vary

	STOP&GO	VABPRO	CQO	VFM	MEAT
Assessment parameters	Evaluation of • **Patient's clinical outcomes** • **Performance level of the technology used** • **Population impacted**	Overlapping factors between • **Outcomes** (patient, user, commissioner) **and** • **Value** (individual and subjective value) resulting in a win-win for the payer, provider, and patient	Evaluation of • **TCO**–across the product life-cycle, e.g., installation, maintenance, disposal costs etc. • **Product quality and patient outcomes** rating against alternatives	Evaluation of • **Overall costs Health outcomes** • **Impact on all directly related stakeholders** • **Societal impact** **Assessment** is done **using the following criteria:** • **Economy** • **Effectiveness** • **Efficiency** • **Equity** • **Sustainability**	Sequential evaluation of • **Patient's clinical outcomes** divided by the **TCO** • Patient and user **safety and experience**, hospital and ecosystem **KPI improvement** • **Innovation, sustainability, and socio-economic** impact

Sources: Secondary research

Global case studies on VBP implementation

Concepts of VBP have been implemented with varying intensities across different geographies



CANADA: Competitive dialogue on case history and product design specifications, **risk sharing,** along with **government support** resulted in procurement of advanced products, resulting in better patient outcomes & patient safety

UK: Product innovation, patient pathway mapping and cost analysis resulted in reduction in expenditure as well as reduction in hospital stay

NORWAY: Inclusion of patient feedback and outcomes with a **competitive evaluation period** increased patient safety and ease of use for staff

FINLAND: **Patient outcomes focus** resulted in enhanced patient safety

CHINA: **Used comprehensive stakeholder capability in order to look at value in MedTech procurement**

SWEDEN: Comprehensive services perspective, competitive dialogue resulted in lower product life-cycle cost, higher quality of equipment and focus on innovation

FRANCE: Competitive dialogue, surgical pathway mapping, comprehensive solution designing & appropriate vendor evaluation criteria resulted in optimal patient clinical outcomes

COLUMBIA: Competitive tendering and detailed vendor evaluation on quality and cost aspects resulted in high quality, best cost imported equipment

ITALY: Forward commitment procurement method with a **competitive dialogue**, whereby the Government health authority specified a number of 'unmet needs' led to faster services and reduced pollution

SPAIN: Total Cost of ownership, definition of procurement outcomes resulted in optimal hospital operations outcome and patient clinical outcomes

Sources: Secondary research

Case Study 1: VBP Implementation in United Kingdom

Innovative solution reduced the cost and length of stay in parotidectomy surgery

Problem	Stakeholders	Intervention	Impact
• **High length of stay** for patients (2.5 days) • **High cost** of procedure • **Patient discomfort** due to placement of surgical drain after the surgery	• Hospital's **clinical team** • Hospital **procurement team** • Sealant **manufacturer**	• New **innovative sealant product ARTISS** was introduced • The Baxter Healthcare project team facilitated a **broader pathway analysis** • Manchester University's NHS Foundation **charted patient pathway and its costing** • The surgeon's team **redesigned the surgery protoc ol**	• **Reduced the need for overnight stays** in favor of a day care procedure • **Reduced 2.5 days** of hospital stay and thus **improved bed availability** • **Reduced patient discomfort** • **Reduced cost per patient by 805 pounds**

Critical Success factors:	
	• **The healthcare provider and manufacturer engaged in pre-procurement dialogue.** • **The manufacturer and provider collaborated and conducted pathway analysis to measure the desired outcome and incorporate appropriate innovation.** • **The healthcare provider developed a core team with the relevant stakeholders for value assessment.**

Sources: https://www.supplychain.nhs.uk/news-article/collaborative-working-reduces-overnight-stays-for-parotid-surgeries-in-value-based-procurement-pilot/

Case Study 2: VBP Implementation in Catalonia – *Assisted in improving cost efficiency for Implantable Cardioverter Defibrillators (ICD device)*

Problem	Stakeholders	Intervention	Impact
• **High rate of complications post ICD implantation surgery** • **Inability to monitor** the patient's progress • **High cost** of device	• AQuAS - Catalan **Agency for Health Information, Assessment, and Quality** • **Clinicians & Finance Department** of Sant Pau Hospital • ICD **manufacturer**	• AQuAS initiated **competitive dialogue** after **stating the needs of the service** and expected companies to suggest solutions to them • **Total cost of ownership** and **delivery of outcomes beyond the device** were mapped • AQuAS procured a **comprehensive service** related to an ICD with a four-year contract worth €10 million	• **10% drop in outpatient visits** • **10% reduction in complications** • A new service contract, which **included devices, technical assistance and remote monitoring center for patients with ICDs** • **Increased stakeholder collaboration** along the care pathway

Critical Success factors:

- The healthcare provider **documented the desired outcomes developed a core team with the relevant stakeholders**
- The **Government agency facilitated pre-procurement dialogues**
- The manufacturer mapped the Total Cost of Ownership (TCO) for the product
- The manufacturer **enhanced the service KPIs to convert individual product into a solution**

Sources: https://magnify.partners/wp-content/uploads/2020/06/The-European-public-procurement-opportunity-Delivering-value-in-medtech-final.pdf

Case Study 3: VBP implementation in Denmark – *Helped in higher throughput & savings by using Artificial intelligence (AI) for providing optimal radiation therapy to pelvic area cancer patients*

Problem	Stakeholders	Intervention	Impact
• **High instance of complications and side effects** in poor prognosis cancer patients • **Overspending in the total cost of care** despite focus on reducing direct treatment costs	• **Clinicians, physicists and administration** of Herlev & Gentofte Hospital • Regional Council of the Capital Region of Denmark **(Government)** • **Manufacturer**	• **Strategic procurement** of radiation devices was done **with pre-defined clinical and technical outcomes** • **Targeted treatment approach** for pelvic area cancer patients • Selected the vendor who provided **innovative AI with the linear accelerator**, along **with home care monitoring devices**	• Manual processes around radiation therapy were automated, quicker treatment provided **care availability to ~500 incremental patients annually** • **Daily individualized advanced treatment plan** for patients based on tumor size measurement • **Savings of ~DKK 260 million**

Critical Success factors:	
	• The Government provided the **appropriate regulatory framework** for procurement based on value • The healthcare provider **developed a core team with the relevant stakeholders for value assessment** • **The healthcare provider and manufacturers engaged in pre-procurement dialogue** • The selected manufacturer **enhanced the service KPIs** to incorporate **appropriate innovation**

Sources: https://magnify.partners/wp-content/uploads/2020/06/The-European-public-procurement-opportunity-Delivering-value-in-medtech-final.pdf

Case Study 4: VBP implementation in France – *Helped in reducing the hypothermia rate in post-operative patients*

Problem	Stakeholders	Intervention	Impact
• **Complication of hypothermia post-surgery in 54% patients** • **Sub-optimal clinical care chain, surgery pathway & heating system**	• **Anesthetists, biomedical engineers, pharmacists, nurses** of Hospices Civils de Lyon • **Manufacturer**	• **Detailed study of the surgical pathway** and probable pain points • **Competitive dialogue** among hospital stakeholders and vendors • **Vendor evaluation criteria** was **defined** as 40% cost, 35% quality and 25% support • **Designing of a comprehensive solution** to keep patient core temperature above 36.5 C along the peri-/post-operative process	• **Active patient warming** along the peri/post-operative process, skin & fluid • **Patient core temperature monitoring** along the peri-operative process • **Reduced incidence and the cost of complications du e to hypothermia was avoided**

Critical Success factors:	
	• The healthcare Provider **documented the desired outcomes using comprehensive stakeholder capability engagement** • The h**ealthcare provider and Manufacturers engaged in pre-procurement dialogue** • The selected Manufacturer **enhanced the service KPIs** to design a comprehensive solution

Sources: https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-hbax.pdf

Case Study 5: VBP implementation in Sweden – *Led to better patient outcomes and improvement in overall quality of services*

Problem	Stakeholders	Intervention	Impact
• **High equipment life-cycle cost** • **High cost of upgrades**	• **Clinicians, biomedical engineers, quality and finance department of** Karolinska University Hospital • **5 tender participant companies** • **Manufacturer**	• Karolinska University Hospital issued 14-year tender for **complete imaging services** (MRI, CT, USG etc.) **instead of individual equipment** • **All relevant provider stakeholders specified** the technical **standards** which needed to be maintained across the contract period (capability, services, replacement, upgrades etc.) • **Competitive dialogue** was done for vendor selection	• **Reduced product and services life-cycle cost** • High **quality of equipment** • The provider also got a local **innovation hub funded by the vendor for research** and education which focused on **improvement of outcomes** in 10 high-priority therapy areas

Critical Success factors:

- The healthcare provider **documented the desired outcomes & developed a core team with the relevant stakeholders**
- The **healthcare provider and manufacturers engaged in pre-procurement dialogue**
- The selected manufacturer **enhanced the service KPIs to provide comprehensive solution instead of individual product**

Sources: https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-fibex.pdf

Case Study 6: VBP implementation in Canada – *Led to optimal patient outcomes and significant cost benefits*

Problem	Stakeholders	Intervention	Impact
Southlake Regional Health Centre in Newmarket, Ontario had: • **Almost all contracts** for cardiac equipment **were expiring at the same time** • The separate tenders represented a **high spend (**$25M in supplies, or about 8% of the total hospital spend)	• **Treating physicians & hospital administration** • **Ministry of Government and Consumer Services** • **Manufacturer**	• **Defined the desired** clinical, technological, organizational and experiential **outcomes and procurement objectives** • Engaged in **competitive dialogue** and **invited bids** from shortlisted vendors • Defined phase wise evaluation criteria with maximum focus on outcomes and quality performance indicators	• **Resulted in 35% average savings, at least 4% in additional value** • Creation of a **new accountability framework** with **specific warranties for patient outcomes linked to performance** targets (e.g., readmission rate). • **Improved clinical workflows,** • **Lower readmission rates,** • **Reduced length of stay**

Critical Success factors:	
	• The healthcare provider **documented the desired outcomes & developed a core team with the relevant stakeholders** • The **healthcare provider and Manufacturers engaged in pre-procurement competitive dialogue** • The selected manufacturer **enhanced the service KPIs** to incorporate **appropriate innovation** • The **Government provide appropriate regulatory framework for procurement based on value**

Sources: https://www.medtronic.com/ca-en/about/news/Innovative_procurement.html

Case Study 7: VBP implementation in Netherlands – *Assisted in cost efficient and effective patient monitoring by procurement of a comprehensive solution*

Problem	Stakeholders	Intervention	Impact
• Erasmus Medical Centre wanted to procure **beds for efficient patient monitoring** • The new facility's design had **doors with no windows**. This required the **nurses to open each door** to make sure patients were in bed	• **Treating physicians & hospital administration** • **Procurement team** • **Manufacturer**	• **Digitally connected bed was developed** which offered an innovative comprehensive solution • **The bed sent an alert to the nurse** if the patient has moved from the bed • The hospital **purchased 800 beds, robotic washing solution, integrated digital monitoring devices for a 15-year partnership**	• Estimated benefit of **€5,00,000 per year** through reduced nursing cost, coupled with reduced length of stay by 1 day • **The beds caused improved workflow efficiency** – they automatically weigh the patient (a step avoided from the nurse's routine), reduced pressure ulcers and risk of infections

Critical Success factors:	
	• The healthcare provider **documented the desired outcomes & developed a core team with the relevant stakeholders** • The h**ealthcare provider and manufacturers engaged in pre-procurement dialogue** • The selected Manufacturer **enhanced the service KPIs to provide comprehensive solution instead of individual product** as well as **incorporate innovation**

Case Study 8: VBP implementation in Wales – *Led to reduced complications & better management of volumes by procurement of a comprehensive solution*

Problem	Stakeholders	Intervention	Impact
• **High rate of complications in** patients **requiring blood thinners** • **High volume of ~400,000 blood tests** for patients which require blood thinners were being done	• **Pathologists, clinicians & hospital administration** • **Procurement team** • **Manufacturer**	• **A comprehensive solution-based offering was designed** which included medical devices, diagnostics and consumables, training, software and care expertise • Contract was awarded to **single provider of testing equipment & consumables** as well as **anticoagulation dosing s oftware**	• **Reduced patients visit to ER by up to 20%** • Patients can monitor their blood levels

Critical Success factors:	
	• The healthcare provider **documented the desired outcomes & developed a core team with the relevant stakeholders** • The h**ealthcare provider and MedTech company engaged in pre-procurement dialogue** • The selected Manufacturer enhanced the **service KPIs to provide comprehensive solution instead of individual product** as well as **incorporate innovation**

Case Study 9: VBP implementation in Netherlands- *Assisted best preferred provider selection for cataract surgeries*

Problem	Stakeholders	Intervention	Impact
• Zilveren Kruis, the largest health insurer in The Netherlands **wanted to engage the best preferred provider network for cataract surgeries**	• **Company administration** • **Company business development team** • **Business development and clinical teams from 5 hospitals**	• **SMEs** from the provider's side **defined quality of care** • **Insurer set reimbursement criteria** based on clinical outcomes • **Multiple providers engaged** to reduce waiting time for patients	• **Lower complication** and follow up surgery rate • R**educed long-term cost of care** • **Lower waiting time** for surgery • **High patient satisfaction** rate • **Attraction of new members** due to high-quality services

Critical Success factors:	
	• The healthcare Provider **documented the desired outcomes** • **The payor & the healthcare providers engaged in pre-procurement dialogue** • **The payor used comprehensive stakeholder capability to enhance the service KPI**

Sources: https://www.tmabevents.be/MedtechConference2019/Posters/6.pdf

Case Study 10: VBP Implementation in Switzerland – *Assisted in reduction of redo cases*

Problem	Stakeholders	Intervention	Impact
• **High complication and redo rate in Atrial fibrillation ablation procedures** at La Tour, a private clinic of 180 beds	• **CEO, CFO and procurement & lead electrophysio-logist** from the clinic • **Managing Director, business unit leader, strategic account manager, value added solutions, finance, legal, health care compliance, and pricing teams** from the manufacturer	• **Cohort of patients was defined -** patients undergoing paroxysmal atrial fibrillation proced ures • Outcome thresholds were defined • **Acquisition of new technology** • 50% rebate on products needed for redo for procedures above **pre-set outcome thresholds (risk sharing)**	• **Reduction of redo% from 30% to 10%** based on new technology • **50% reduction in cost of redo procedures** • **Reinforced reputation of hospital** as high quality and innovative provider • **High patient satisfaction** rate

Critical Success factors:	
	• The healthcare provider **documented the desired outcomes & developed a core team with the relevant stakeholders** • The he**althcare provider and manufacturers engaged in pre-procurement dialogue** • MedTech companies **enhanced the service KPIs** to incorporate **appropriate innovation as well as a risk sharing arrangement**

https://www.vbpcommunity.eu/documents/1_AtrialFibrillation_RomanIselin_LaTour.pdf

Case Study 11: VBP Implementation in Uruguay – *Helped in procuring quality imported equipment at lowest cost*

Problem	Stakeholders	Intervention	Impact
• Total **dependence on imported MedTech** as negligible indigenous manufacturing • **High healthcare expenditure**	• National Health Technology Management Unit under Ministry of Public Health (**Government**) • **MedTech companies**	• **Competitive tendering process was used** for all MedTech procurement • The **evaluation before vendor registration** included**:** - Quality certifications for the production process - Product quality certifications - Technical report of the product - Affidavit of maintenance of the equipment during the product life	• **High quality, best cost, evidence-based procurement** from developed countries

Critical Success factors:	
	• The Government provided the **appropriate regulatory framework** for procurement based on value. • The healthcare provider **developed a core team with the relevant stakeholders to assess value** • The **healthcare provider and manufacturers engaged in pre-procurement dialogue**

Sources: https://2016.export.gov/industry/health/healthcareresourceguide/eg_main_116248.asp

Key learnings from the global case studies

In summary, the global case studies highlighted various facets of VBP implementation and offered evidences that VBP can be implemented across different types of economies as well as care settings

TYPES OF ECONOMY

Developed

Developing

- VBP has been **implemented across both developed** (case studies in Netherlands, UK, Switzerland and Catalonia) **and developed economies** (case study on Uruguay)
- **Developed countries have seen faster uptake** due to higher awareness, regulatory reforms and better capability of the procurement teams to assess value

TYPES OF CARE SETTINGS

Public Sector

Private Sector

- VBP has been i**mplemented in both public** (case study in Catalonia**) and private healthcare** (case studies in Switzerland, Netherlands (Insurance)
- Public sector implementation is **driven by the Government making regulatory reforms** to include outcome-related aspects in procurement
- Private sector uses VBP to enhance care quality and reputation, which also aids in increasing patient footfalls through word-of-mouth referrals

Stakeholder insights

"In developed economies, VBP implementation is often seen as a normative practice like in the EU"

"A basic level of VBP implementation is being done in developing countries like Uruguay and India without any specific framework"

"The EU directive on healthcare procurement was a major milestone in spurring governments to implement VBP"

"The private sector uses VBP to distinguish itself from competition and become a center for excellence through efficient treatment"

The global case studies also highlighted that VBP can be implemented across different types of procurement offerings and payment mechanisms in the healthcare ecosystem

TYPES OF OFFERINGS

Products

Solutions

- VBP can be implemented for **both individual products** (case study in Switzerland) **and comprehensive solutions** (case studies in the Netherlands and Catalonia)
- VBP is **more suitable for products** which are relatively **more complex** and have **higher room for improvement** through research & innovation

TYPES OF PAYMENT MECHAN-ISMS

Diagnostic Related Groups (DRG)

Fee for service

- VBP has been implemented **irrespective of payor type**
- **DRG** mechanisms also support VBP due to **focus on outcome-based reimbursement**
- The Fee for Service model **focuses on process improvement** to achieve **effectiveness and efficiency** vis-à-vis the cost

Stakeholder insights

"VBP has been implemented with good results in products ranging from radiation therapy machines right up to under pads!"

"We developed a digitally connected bed which automatically weighs the patient and alerts the nurse when the patient has gotten up out of bed"

"In many member countries, the reimbursement is done on the successful outcome of procedure based on the DRG"

"The Columbian Health System still has a fee for service system, but steps are taken to customize VBP implementation.

The global case studies also highlighted that key stakeholders had to take multiple steps for effective implementation of VBP

Government

- Focus on **improvement in patient outcomes**
- **Appropriate regulatory landscape** in procurement to include outcomes
- **Facilitating transparent pre-procurement dialogue** with the MedTech companies

MedTech Companies

- **Ensure availability of research-based outcomes data**
- **Enhance the service offer** for products as well as **innovate to develop comprehensive solutions**
- **Participate in competitive dialogue** and trial-based selection process
- **Propose feasible risk-sharing modules** to share cost of complications

Providers

- **Define desirable criteria and procurement objectives**
- **Carry out care pathway process mapping** to highlight pain points
- **Engage comprehensive stakeholder capability**
- **Engage in pre-procurement dialogue** with the MedTech companies
- **Maintain and share data** on care delivery outcomes

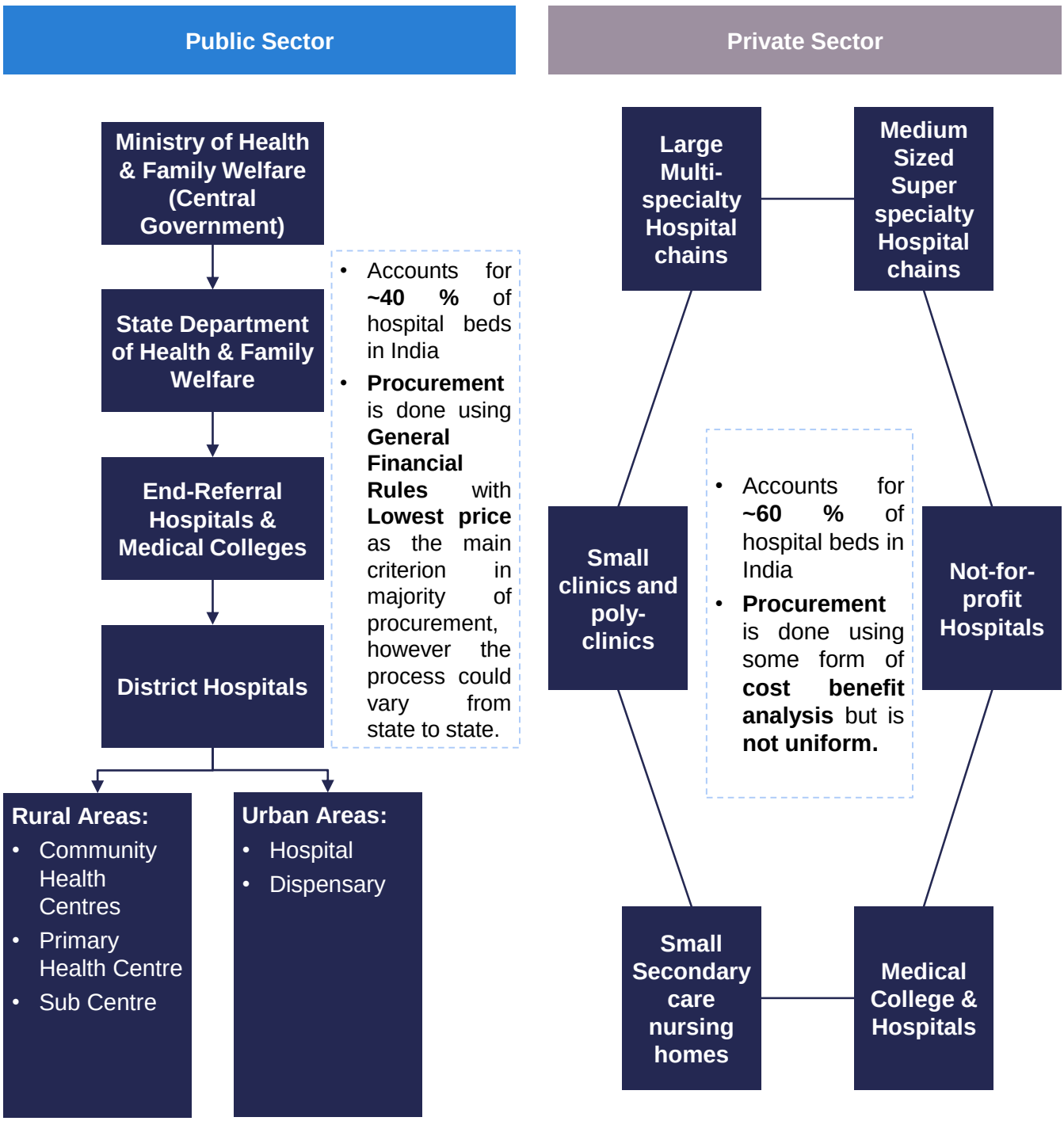
Payors

- **Define and classify quality in care delivery outcomes**
- **Incentivize** high-quality **care delivery outcomes**

Sources: Secondary research, Primary interviews

Section 4 Procurement in the Indian ecosystem

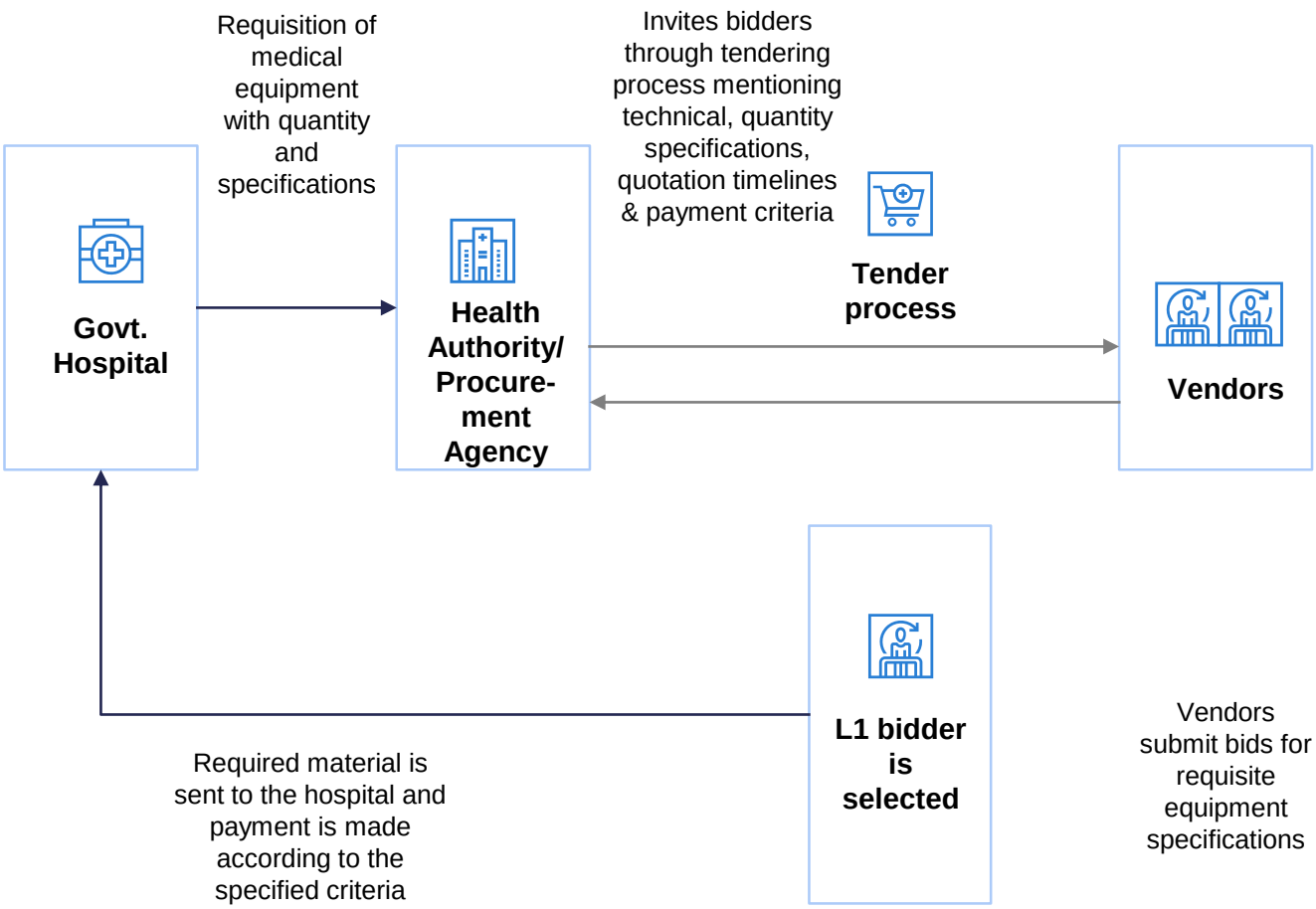
Both public and private providers engage in health care delivery in India, and both follow different models of procurement



Sources: https://ficci.in/pressrelease-page.asp?nid=3677

Procurement of MedTech in the public sector is largely done as per General Financial Rules (GFR) 2017 which specify regulations for requisition, bidding, selection and payment among others

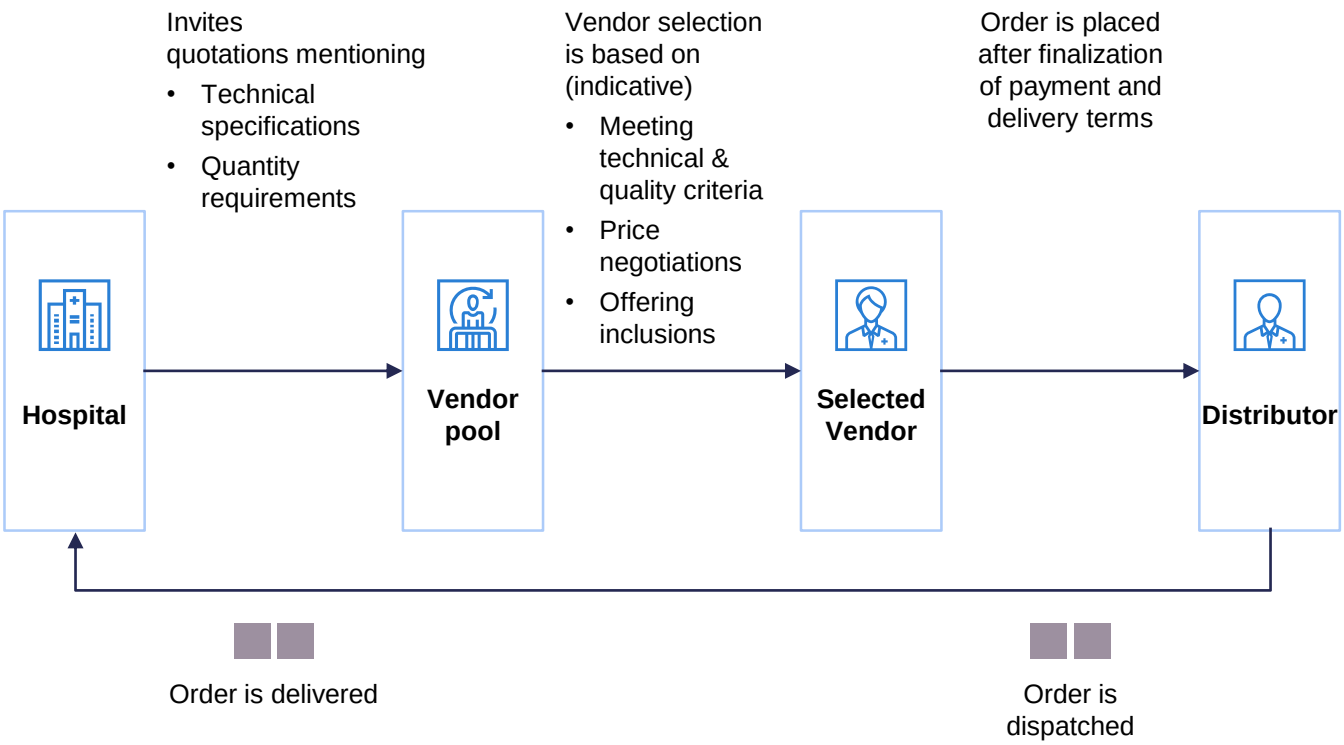
- **General Financial Rules (GFR)** are a **compilation of rules and orders** of Government of India for matters involving **finances**.
- These rules and orders are treated as **executive instructions** to be **observed by all departments and organizations under the Government**



Sources: https://doe.gov.in/sites/default/files/GFR2017_0.pdf

While the private healthcare sector does not focus only on L1, the procurement methodology today largely does not cover all facets of VBP

A Direct procurement



Stakeholder insights

"The private sector in India performs varying levels of cost benefit analysis before procurement of MedTech. The whole exercise is more often done to avail products at best costs"

"Many corporate hospitals use the capabilities of a procurement team which involves the clinicians who are users, the operations team members, the biomedical engineering team and the finance department members"

" Private Hospitals while doing some aspects of VBP despite not under the name of VBP, do not generally map desired clinical outcomes and engage in risk-sharing mechanisms"

Case study 12: Methodology at a leading private healthcare provider in India for procurement of a new PET Scan machine

A The proposition

The **decision** had to be made **between** the **Analog PET-CT** scanner & the **digital PET-CT scanner**.

- The Analog PET-CT scanner has majority installations in the market, has a comparatively lower cost, but uses older technology.
- The digital PET-CT scanner on the other hand uses latest technology but is double the cost and has comparatively lower number of installations.

B The people and parameters involved

- **The Hospital Director** along with the **Head-Nuclear Medicine and Medical Strategy Operation Group** conducted assessment of current and future clinical needs & prepared the specification requirements list.
- Global tenders were then invited, and product demonstrations were done before the **Tender Evaluation Working Group (TEWG)** which includes clinical and technical expert members.
- In addition to basic technical and infrastructural specifications, evaluation was also done on **other quality and outcome parameters** like image resolution, patient comfort, availability of advanced applications, accuracy of data readings, patient safety, scan TAT, redundancy of technology.

C The process

- The TEWG evaluated each bid by **rating** the parameters like **service level, user preference and usability, technical specifications and lifecycle costs** on a **scale of 1 to 5** and assigned a **weightage** of 25%, 20%, 25% and 30% to each parameter, respectively.
- The Tender Evaluation Committee then conducted price negotiations with the eligible vendors. The Unit operations team prepared the business plan which was then approved by the Executive committee and the board.

D The product chosen

The provider **decided to procure the Digital PET-CT Scan** machine from the selected successful vendor (based on both technical and commercial score) as it yielded **benefits** like:

- Better image resolution helping in higher lesion detectability
- Advanced applications like flow motion scanning with continuous bed movement which provides higher patient comfort and avoids overlapping scans.
- Flow motion scanning also helps in differentiating normal physiological uptake vs localized FDG uptake.
- Accurate data for clinical studies,
- Lesser amount of FDG consumption per patient,
- Reduced scan TAT translating to 40-50 % increase in scan capacity.

Innovative models in Indian public procurement

A. Government e-Marketplace (GeM) is an online platform facilitating transparency and ease in all categories of procurement including MedTech procurement for public sector healthcare facilities

Ownership

Launched on 9th August 2016. Owned by GeM SPV (Special Purpose Vehicle) which is a Government-owned, non-profit company under the Ministry of Commerce and Industries, Government of India

Regulation

As per the General Financial Rules 2017 , procurement of goods and services by Ministries or Departments will be mandatory for goods or services available on GeM

Purpose

GeM facilitates online procurement of common use goods & services required by various Government Departments / Organizations / PSUs either by direct buying or by the bidding process

Vendor Evaluation

The credentials of suppliers on GeM shall be certified by Directorate General of Supplies & Disposals (DGS&D)

Pricing

The Government buyers may ascertain the reasonableness of prices before placing the order using the Business Analytics (BA) tools available on GeM including the last purchase price on GeM, department's own last purchase price etc.

Golden parameters

Golden Parameters are further detailed specifications which have maximum impact on technical aspects and allow the procurer additional scope of evaluating a product to influence buying decision

Sources: Secondary research

B. Procurement under general instructions on Procurement and Project Management (October 2021) using Quality and Cost Based Selection (QCBS)

Parameter	Details
In effect from	**29.10.2021**
Governance	**Procurement Policy Division, Department of Expenditure, Ministry of Finance, Government of India**
Intent	To reform the public procurement policy for non-consultancy services and works (for items deemed as Quality Oriented Procurement (QOP), for procurement value of up to Rs. 10 Crore, where procurement was initially done using the L1 method only.
Features	• In all cases of QOP, a Special Technical Committee is constituted that defines the quality, technical, and financial rating criteria. • The instructions allow Pre-Notice Inviting Tender (NIT) where the procurement entity may not have the required knowledge to formulate tender provisions; a pre-NIT conference can be organized publicly to get inputs from vendors. This conference also discusses the defined quality criteria and the scoring methodology. • An independent committee is constituted to conduct an objective evaluation of the procurement based on the pre-defined criteria. • The weightage given to the non-financial criteria (quality / technical) and financial criteria are 30% and 70%, respectively; the bidder scoring the maximum overall is selected.

Sources: General instructions on Procurement & Project Management (29th October 2021)

Case study 13: Methodology for procurement of Linear Accelerators by West Bengal Medical Services Corporation (WBMSCL) for 4 Government Medical College Hospitals

A The proposition

WBMSCL was requested by the Government of West Bengal to procure **6 Linear Accelerator machines** on their behalf to be supplied and commissioned in 4 Government Medical College Hospitals. The **3 types** required were as follows:

- High-End High Energy LINAC (2 nos.)
- High-End High Energy LINAC (with 15 MV photon Energy Trimmed off) (1 no.)
- High Energy LINAC (3 nos.)

Along with the machines, WBMSCL **required relevant software, hardware and accessories to be included** in the procurement.

B The people and parameters involved

- The **Technical Evaluation Committee** and the **Financial Evaluation Committee** of the WBMSCL and **representatives from the manufacturer** were the main stakeholders involved.
- The technical committee **pre-defined the specifications** for aspects of machine performance, internal quality assurance checks, patient safety, ease of utility, currentness of technology etc.
- **Measurable quality standards** were also defined with their rationale e.g., radiation dose rate, image resolution, size, collimators etc.
- The finance committee looked for **comprehensive aspects of costs** like, product cost, maintenance costs, operationalization costs, import costs, training costs etc. **along the product life cycle**

C The process

- The WBMSCL **floated the tender** mentioning detailed requirements of the manufacturer, the product, the accessories and the life-cycle costing.
- WBMSCL engaged in a **pre-bid discussion with the manufacturers** interested in bidding in order to clarify the requirements.
- Post the evaluation of quality, technical specifications and lifecycle costs, **each bid was ranked in the QCBS method** based on the total score obtained using the **weightage of 40% and 60% for the "cost" and the "quality"** respectively.
- **The bidder obtaining Highest Combined Quality and Cost Score (CQCS) was awarded the contract.**

Section 5 Challenges for implementing VBP

Low awareness, high percentage of OOPEs, lack of data on clinical outcomes are some of the challenges in the Indian healthcare ecosystem

Low awareness about VBP	Regulatory framework limiting procurement beyond L1	Lack of data on clinical outcomes
• Globally the concept of VBP is evolving and gaining traction across multiple countries • However, our discussions with the stakeholders highlighted that the awareness (and therefore also the benefits) about VBP in India is currently limited including in the private sector	• In India, the policy mandates the public sector hospitals to procure MedTech products as per the GFR (2017). The rules mandate that public sector entities engage in a tendering process mentioning technical and quantity specifications, and finalize the bid based on L1.	• The global case studies indicate that healthcare stakeholders measured and documented patient clinical outcomes. • In India, however there is limited baseline information availability in terms of capturing, maintaining and sharing of data w.r.t clinical outcomes. This deters the evaluation of 'value' from a patient outcome perspective.

Stakeholder insights		
"VBP is still a nascent concept in India, there needs to be a lot more generation of awareness regarding VBP, its features and benefits"	"Public sector procurement, including the GEM portal currently has bid qualification based on technical specifications and bid finalization based on lowest cost, the value based on outcomes is not seen"	"Due to high volumes of work with stressed manpower, it becomes difficult to actively capture and maintain data on clinical outcomes on a consistent basis"

Source: Secondary research, primary interviews

The challenges also include limited capability of the procurement team to assess value and lack of appropriate incentivization to healthcare providers

Limited capability in the procurement team	Lack of incentivization to focus on patient outcomes	High out of pocket expenditure
• Our discussions with stakeholders indicated that there is a lack of alignment of the procurement team's focus to strategic objectives. Today, the focus is largely on ensuring product availability at the lowest cost. There is also the issue of limited capability to measure value beyond price	• There is a lack of standards set for defining and classifying the treatment outcomes by private as well as public payors. • While there is an incentivization to go for quality accreditation like NABH, the treatment modality and outcome standards of excellence are not defined and incentivized by the payors.	• In India, while the penetration of healthcare insurance is increasing, majority of healthcare expenses are still borne out of pocket • Hence the focus of procurers is on reducing the up-front cost in order to pass on the benefits of reduced costs to the patient.

Stakeholder insights		
"Given that healthcare delivery in the private sector is majorly done by small hospitals and nursing homes, there is a lack of capability in the procurement team to assess value"	"Currently, the amount reimbursed for treatment is the same irrespective of the treatment modality used or the outcome achieved"	"Due to the majority of out-of-pocket paying patients, emphasis in care delivery and MedTech procurement is on reducing up-front costs"

Source: Secondary research, primary interviews

Section 6

Recommendations and the way forward

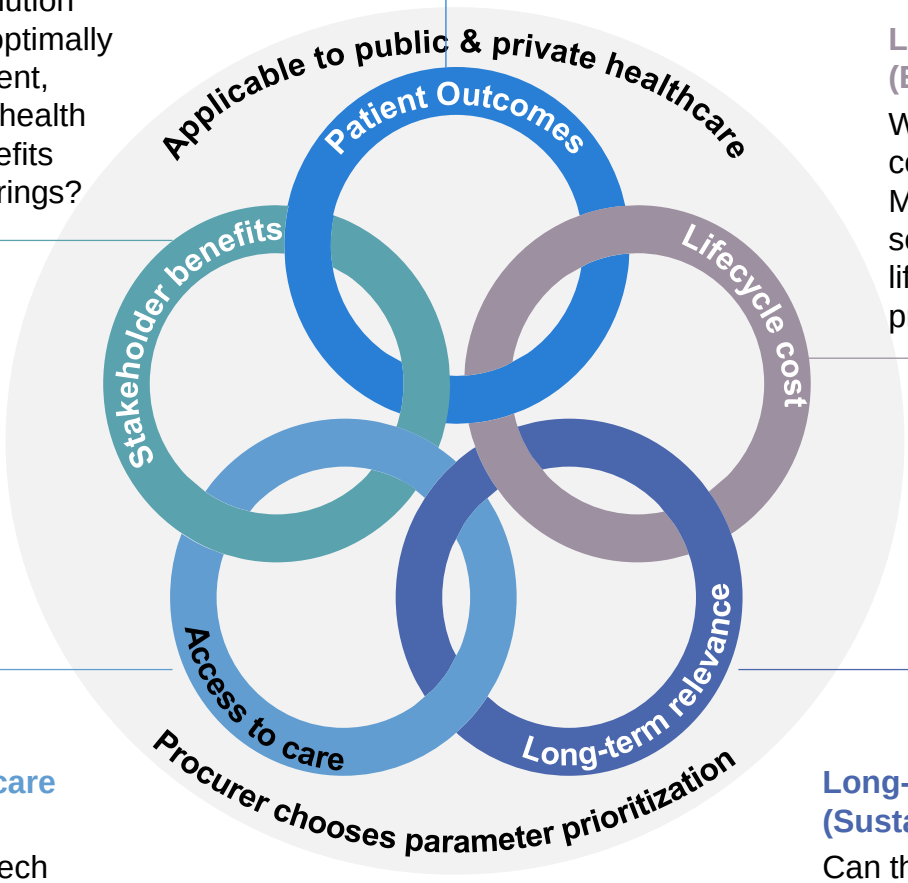
The VBP framework in the Indian context could focus on the following parameters

Patient outcomes (Effectiveness)

How does the MedTech product / solution affect the patient's clinical outcomes?

Stakeholder benefits (Efficiency)

Is the MedTech product / solution capable to optimally provide patient, clinician, or health system benefits against offerings?



Lifecycle cost (Economy)

What is the total cost of the MedTech product / solution across its lifecycle of providing care

Access to care (Equity)

Is the MedTech product / solution able to provide the necessary healthcare service to maximum number of people?

Long-term relevance (Sustainability)

Can the MedTech product / solution stay relevant in the long-term

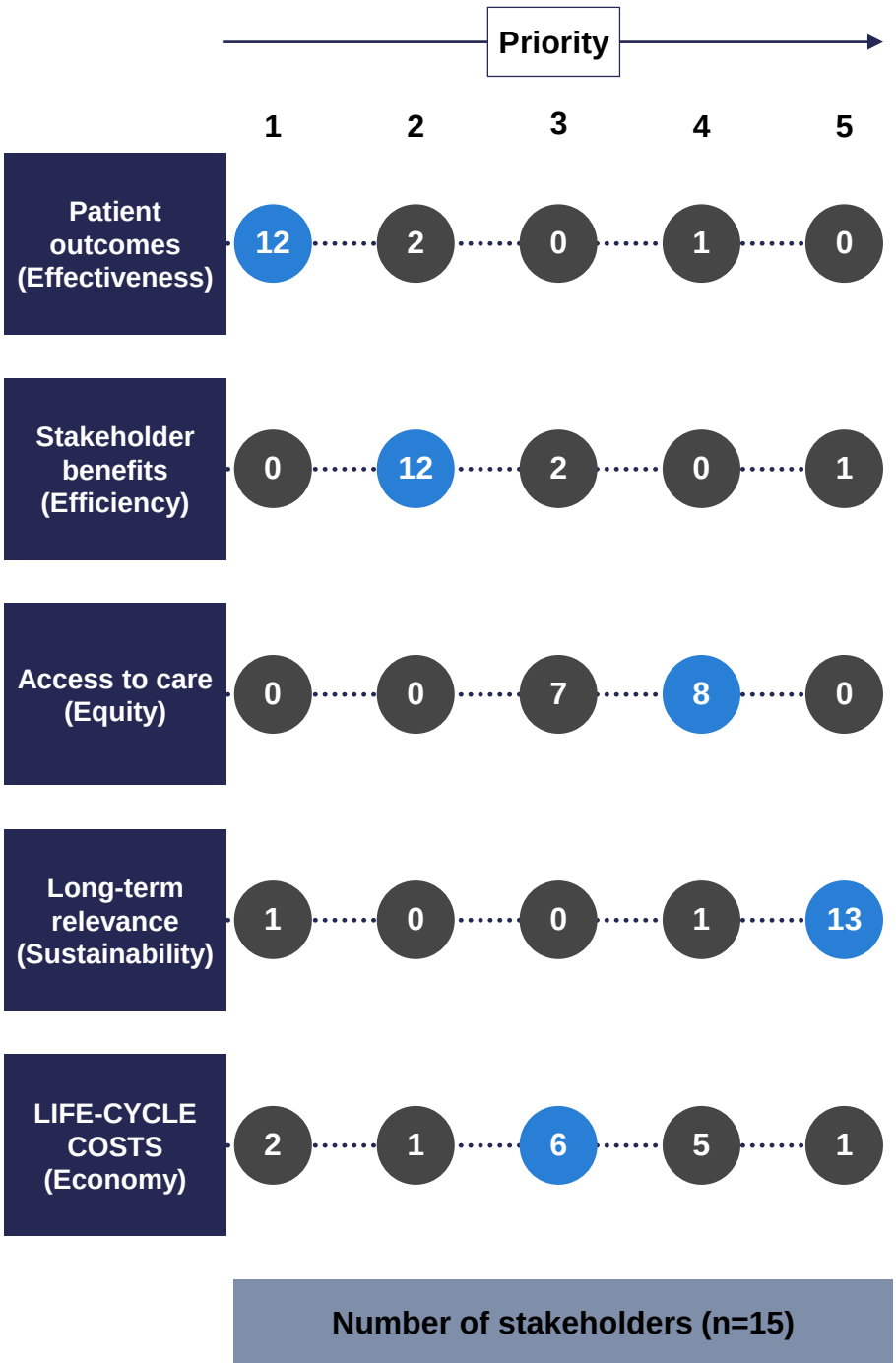
Adapted from Value-based procurement of medical equipment, The Access and Delivery Partnership (ADP), June 2020; https://www.theglobalfund.org/media/8596/core_valueformoney_technicalbrief_en.pdf?u=637169196780000000 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf

For these parameters, the following is the indicative list of measurable elements; each provider can customize the relevant parameters and elements based on its requirements

PATIENT OUTCOMES (Effectiveness)	LIFE-CYCLE COSTS (Economy)	STAKEHOLDER BENEFITS (Efficiency)	ACCESS TO CARE (Equity)	LONG-TERM RELEVANCE (Sustainability)
Impact on clinical outcomes like reduction in : • return to OPD, • re-admission/ redo-surgery, • re-infection, • LOS, • invasiveness etc. a) Proof of outcome improvement b) Proof of outcome standardization	**1. Phase 1** - Purchase, Transport, Installation, Training costs etc., **2. Phase 2 –** Operational, Maintenance, Breakdown, Consumable costs etc. **3. Phase 3 –** Upgradation, Post warranty, Condemnation cost etc.	1. Care pathway ease 2. Staff safety & feedback 3. Cost reduction 4. Vendor assistance in education & research 5. Vendor provides life-cycle support as appropriate 6. Reduction in diagnostic time / processing time / treatment time	1. Increased capability for patient intake / utilization 2. Improvement in social health indicators 3. Patient satisfaction / feedback 4. Cost reduction 5. Improved mobility / independence / quality of life in patients	1. Quality certifications 2. Currentness of technology 3. Level of technology use 4. Pace of innovation & innovativeness of product 5. Need for upgrades 6. Compatibility with Internet of Things (IOT) 7. Provision for remote monitoring

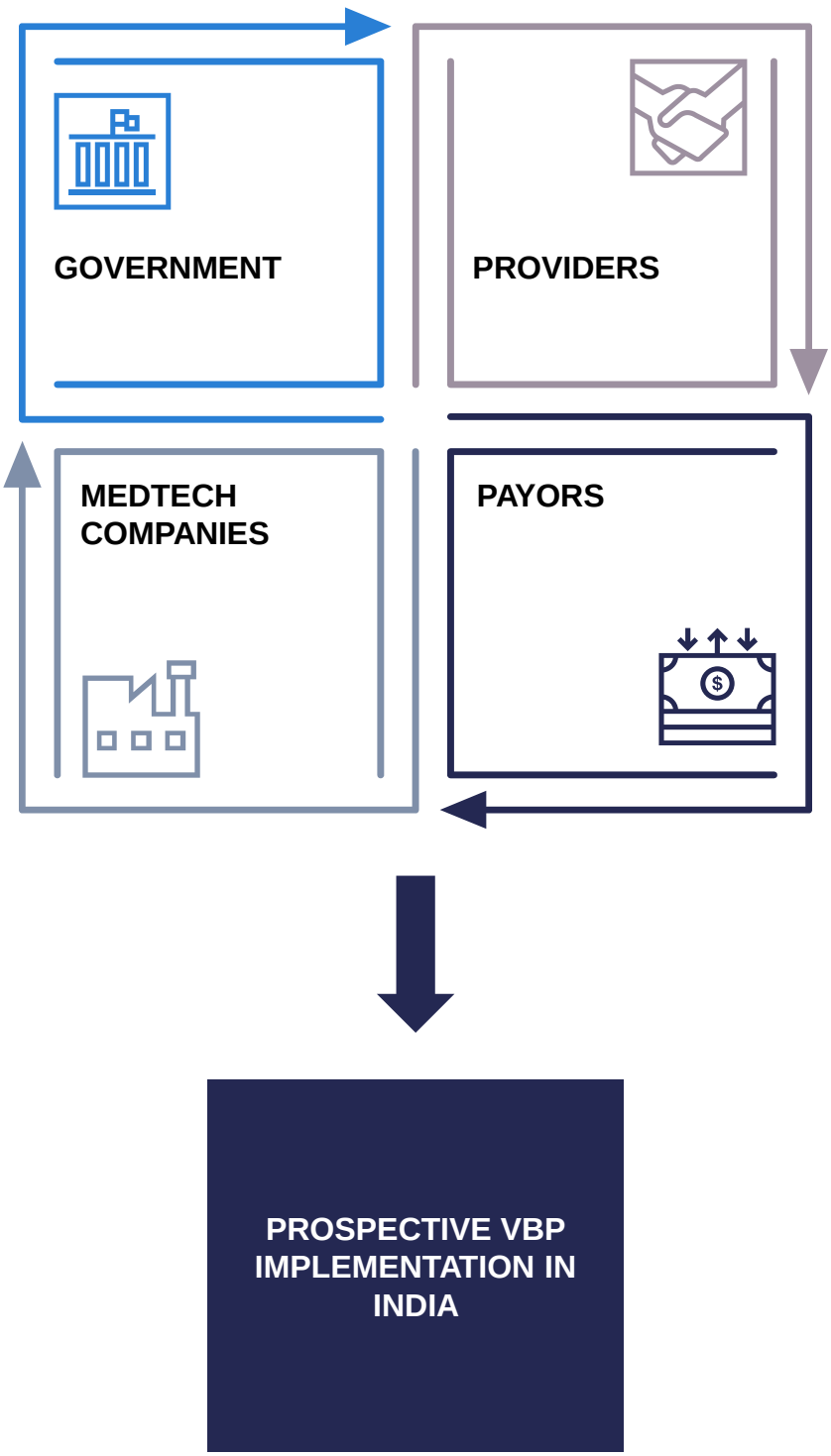
Adapted from Value-based procurement of medical equipment, The Access and Delivery Partnership (ADP), June 2020; https://www.theglobalfund.org/media/8596/core_valueformoney_technicalbrief_en.pdf?u=637169196780000000 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf

A varied group of 15 stakeholders including representation from Global experts, MedTech Associations, Healthcare providers, Government and Regulatory bodies rated the prioritization of the 5 parameters of the VBP framework



- **Priority 1 to Priority 5** are the levels of **prioritization** given by the interviewed stakeholders **in descending order**
- For most of the **Global Experts and MedTech Association representatives** (global) **patient outcomes and stakeholder benefits have the prime focus**
- **Indian Healthcare Providers** and MedTech Association **rated cost (economy)** as the **most important**
- **All** stakeholders **rated long term relevance (sustainability)** as the **lowest** priority and said that this can be **assessed after establishment of product or solution**

For facilitating VBP implementation in India, each of these stakeholders need to take multiple steps



The Government of India could facilitate VBP implementation through updated procurement policies and develop standardized procurement guidelines…

Government | MedTech Cos | Providers | Payors

Modify the regulatory landscape to enable implementation of VBP in MedTech procurement → **Increase focus on quality & patient outcomes** → **Increase procurement team capability as well as facilitate pre-procurement dialogue** → **Develop standardized procurement evaluation criteria**

- The European Union had recommended that the member countries include quality and outcome-based criteria in assessment of MedTech procurement in 2014 which led to the growth of VBP in those countries. Similarly, the Indian Government needs to bring in the appropriate regulations which will enable VBP for MedTech products in the public sector.
- Recently, the Indian Government has introduced the QCBS framework for procurement which allows assessment of quality parameters in addition to cost parameters

Modify the regulatory landscape to enable implementation of VBP in MedTech procurement → **Increase focus on quality & patient outcomes** → **Increase procurement team capability as well as facilitate pre-procurement dialogue** → **Develop standardized procurement evaluation criteria**

- The Government has expanded Health Insurance coverage to vast sections of the society in the past few years including launching of PMJAY which covers ~500 million persons. While such health insurance coverage / schemes incentivize accreditations (like NABH), there is room to further incentivize outcomes and increased focus on quality
- As a policy, the government should take steps such which encourage providers to monitor and publish outcomes and deliver highest levels of clinical excellence. This in turn will aid providers to procure those MedTech equipment which help them deliver clinical excellence

Sources: Stakeholder discussions, analysis

...as well as develop policies to increase focus on patient outcomes

Government | MedTech Cos | Providers | Payors

Modify the regulatory landscape to enable implementation of VBP in MedTech procurement

Increase focus on quality & patient outcomes

Increase procurement team capability as well as facilitate pre-procurement dialogue

Develop standardized procurement evaluation criteria

- VBP entails involvement of multiple stakeholders within the providers, as well as looking at multiple aspects of value beyond L1. Hence the procurement team needs to be equipped with capabilities to evaluate aspects of other dimensions beyond price
- The Government thus should run training programs to equip the procurement team with the requisite skill sets
- The government should also encourage the public sector hospitals to undertake pre-bid discussions with the MedTech companies like it was seen in the case studies of Catalonia, Denmark, France etc.

Modify the regulatory landscape to enable implementation of VBP in MedTech procurement

Increase focus on quality & patient outcomes

Increase procurement team capability as well as facilitate pre-procurement dialogue

Develop standardized procurement evaluation criteria

- While few states / procurement agencies might have started looking at procurement criteria beyond L1, Department of Procurement / Government of India can look at developing standard / suggestive guidelines with respect to procurement of medical equipment by incorporating aspects of VBP.
- Government can also work on creating awareness about the benefits of VBP as well as the abovementioned guidelines (as and when developed) amongst various Government procurement agencies / departments.

Sources: Stakeholder discussions, analysis

MedTech companies can engage in fruitful pre-procurement discussions with procurers to develop customized solutions...

Government | MedTech Cos | Providers | Payors

Engage in competitive pre-procurement dialogue → **Develop customized solutions for procurer's needs** → **Improve availability of research-based outcomes data** → **Build feasible risk sharing pro-positions**

- As MedTech companies are subject matter experts regarding the applications of technology in care delivery, both in terms of diagnostics and therapeutics, they can assess and understand the care delivery needs of the healthcare providers.
- MedTech companies could engage in transparent and well documented pre-procurement dialogue with the providers and the government stakeholders in order to understand the defined outcome criteria as well as the pain points. This would help in proposing relevant innovative solutions which best address the needs.

Engage in competitive pre-procurement dialogue → **Develop customized solutions for procurer's needs** → **Improve availability of research-based outcomes data** → **Build feasible risk sharing pro-positions**

- Based on the pre-procurement discussions and understanding of the procurer's needs, as well as the desirable outcome criteria, the MedTech companies should develop innovative solutions to be able to provide a comprehensive solution given the procurer's pain point/ requirement and not look at only selling an isolated product

Sources: Stakeholder discussions, analysis

...as well as risk-sharing mechanisms

Government | MedTech Cos | Providers | Payors

Engage in competitive pre-procurement dialogue → **Develop customized solutions for procurer's needs** → **Improve availability of research-based outcomes data** → **Build feasible risk sharing pro-positions**

- Globally, it is observed that providers capture and maintain outcomes data for many steps in the care pathway. This data serves as a baseline for measuring the improvement in outcomes by using any MedTech product
- MedTech companies could collaborate with the Indian providers to engage in pilot studies. The data generated in these studies could be captured and used as indigenous standards for measurement of product performance

Engage in competitive pre-procurement dialogue → **Develop customized solutions for procurer's needs** → **Improve availability of research-based outcomes data** → **Build feasible risk sharing pro-positions**

- MedTech companies can develop feasible risk-sharing propositions in order to reduce the overall cost of care to the providers as well as patients and in turn build trust for the product / solution in the ecosystem

Sources: Stakeholder discussions, analysis

Healthcare providers need to develop stakeholder capabilities to assess MedTech procurement…

Government | MedTech Cos | **Providers** | Payors

Develop a health technology / procurement assessment team → **Care pathway process mapping to highlight pain points** → **Engage in pre-procurement dialogue** → **Maintenance of data on care delivery outcomes**

- A dedicated Health Technology / Procurement Assessment team can be developed which is becomes the central point in procurement evaluation prior to decision by the top management.
- The team could indicatively include relevant representatives from the end user department clinician / nurse / technician, biomedical engineering, operations, quality, finance & the medical superintendent.

Develop a health technology / procurement assessment team → **Care pathway process mapping to highlight pain points** → **Engage in pre-procurement dialogue** → **Maintenance of data on care delivery outcomes**

- It is important to carry out detailed process mapping of all care pathways in order to ascertain areas where improvement can be made.
- These pain points can be used to define desirable criteria on clinical outcomes for MedTech procurement

Sources: Stakeholder discussions, analysis

… as well as undertake pre-procurement dialogue with the MedTech companies along with maintaining patient and process specific KPIs regularly

Government | MedTech Cos | **Providers** | Payors

Develop a Health Technology / Procurement Assessment team → **Care pathway process mapping to highlight pain points** → **Engage in pre-procurement dialogue** → **Maintenance of data on care delivery outcomes**

- The pain points which helped in creating desirable outcome criteria can be a vital tool in the pre-procurement dialogue to communicate clear and unambiguous expectations to the MedTech companies.
- The pain points can also be supported with baseline data on clinical outcomes and can me used as a comparative tool to evaluate the proposed improvement any product / solution can bring about in the same

Develop a Health Technology / Procurement Assessment team → **Care pathway process mapping to highlight pain points** → **Engage in pre-procurement dialogue** → **Maintenance of data on care delivery outcomes**

- It is imperative to document the care delivery outcomes for all clinical specialties both pre-procurement as well as post-procurement.
- These outcomes can be used for evaluation of product / solution capabilities, as well as for risk-sharing mechanisms

Sources: Stakeholder discussions, analysis

Payors should incentivize high-quality patient outcomes which in turn will aid providers to procure medical equipment under VBP

Government | MedTech Cos | Providers | **Payors**

Define, classify & incentivize high-quality care delivery outcomes

- Payors need to enhance their outlook on clinical care to include a detailed understanding on clinical outcomes of treatment. They use subject matter experts to set standards of expected results from clinical care delivery which would help to evaluate quality of care.
- This in turn will lead to providers procuring MedTech products which yield high quality outcomes.

Sources: Stakeholder discussions, analysis

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Thank you