Patient-Reported Outcome Measures in Hospital Tendering.

BEST PRACTICES GUIDE TO INCORPORATE PATIENT FEEDBACK INTO HOSPITAL PURCHASING DECISIONS AND PRODUCT SELECTION

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Executive Summary

The purpose of this document is to serve as a resource for health care and procurement organizations that are interested exploring, understanding and incorporating patient-reported outcome measures (PROMs) within hospital procurement processes. This document compiles available information related to patient participation in procurement processes of health services, products and supplies across Canada. With particular emphasis on the information, recommendations and best practices relevant for initial implementation, this document includes information related to the following:

- ▶ **Current State:** Patient-related and/or value-based procurement (VBP) activities currently incorporated into the procurement activities of health care organizations across Canada;
- ▶ **Barriers:** The challenges of incorporating patient-reported measures of outcomes and experiences in tendering processes;
- ▶ **Technical Strategies:** Practical aspects related to the logistics and measurement of PROMs, with particular emphasis on information that would be of use to organizations seeking to incorporate these measures; and
- ▶ **Change Management Strategies:** Different approaches to adopting PROMs in tendering processes, with particular focus on methods of implementation at policy, industry, service provider and patient levels.

This document was informed by a literature review and environmental scan of academic literature and white papers, as well as 12 in-depth interviews and 62 key informant surveys with leaders from shared services organizations (SSOs), group purchasing organizations (GPOs) and hospitals involved in procurement activities.

1. Current State of PROMs

Although the integration of PROMs into procurement processes is not yet widely adopted throughout Canada, there has been an increasing emphasis on VBP across the country, of which PROMs could be a key component. This trend is occurring as hospitals are embracing the concept of value (as a function of outcomes/cost), in contrast to being myopically focused on low cost. Current VBP strategies include the incorporation of clinical/patient criteria, performance measures and experience considerations, as well as processes such as competitive dialogue.

In terms of integration of PROMs in procurement activities and decision-making, the following three classifications of organizations, based on their status of integration and interest, were determined:

a) **Early adopters: Organizations that are currently incorporating PROMs into procurement**

For over one third of participants (35.1%), PROMs were a new phenomena that appeared within their organizations during the past year, while 43.3% of participants started integrating patient-oriented measures into tendering within the last five years and 21.7% of participants started adopting PROMs into procurement processes more than five years ago. These organizations used the following methods to incorporate PROMs:

- o Prioritization of Patient Preferences
- o Patient Representation in Formal Roles
- o Informal Patient Input
- o Patient-Centered Criteria
- o Clinicians as a Proxy for Patient Input

b) **Followers: Organizations that are not currently incorporating PROMs into procurement, but have future plans to do so**

Although these organizations are not currently incorporating PROMs into the procurement process, there is a high degree of interest in learning how this could be done, as well as concrete plans to do so in the future.

c) **Laggards: Organizations that are not currently incorporating PROMs into procurement**

Multiple participants did not have a great deal of exposure to outcomes-based procurement or experience and/or knowledge of how to incorporate PROMs into procurement. Instead, these organizations were focused primarily on clinician input in procurement decision-making and are typically limited by data capabilities.

2. Barriers to Adoption of PROMs

In addition to describing the current state, participants also discussed barriers to incorporation of PROMs, especially those that have caused an organization to not incorporate PROMs in any capacity, or have inhibited the ways in which PROMs can be scaled and sustained. Based on the results of the key informant survey and in order of importance, barriers to the adoption of PROMs were related to: budget, data, stakeholder and patient factors.

▸ **Budget-related challenges:** From a budget perspective, the key issue presented was related to the additional resources required to properly incorporate, collect, measure and assess PROMs. The most notable resource requirements include personnel and data infrastructure costs.

▸ **Data-related challenges:** There are numerous barriers to the collection of advanced patient outcome data, especially in terms of data integration, product traceability and data sharing capabilities. Many participants discussed the administrative burden required for clinicians to report ad hoc patient feedback to a purchasing team, as most electronic patient record systems do not automatically integrate with purchasing databases. Further, it was noted that there is currently a void in sharing performance metrics, as vendors have an advanced understanding of such metrics, but do not freely share information with health care organizations.

▸ **Stakeholder-related challenges:** Several participants spoke of the challenges associated with connecting the various stakeholders required to make purchasing decisions, as having clinicians, administrators, purchasing personnel and patients make decisions collectively is a relatively new method and not yet fully developed. In particular, connecting the various stakeholders considered requisite for purchasing decisions, and subsequently gaining consensus amongst these groups given their competing priorities, were stated as the most pressing challenges.

▸ **Patient-related challenges:** Participants expressed concerns with revealing detailed financial data related to the costs of care and supplies to patients, and therefore, the broader community. Concerns were also expressed with respect to the ability to engage patients in the procurement process, as well as their ability to comprehensively understand the health care system and thus make informed and meaningful contributions.

Despite the existence of these barriers, incorporation of PROMs within procurement processes is possible, as seen in select hospitals across Canada. To do so, participants discussed various technical and change management strategies to best position organizations for success.

3. Technical Strategies to Incorporate PROMs

Leadership of PROMs integration varied from individual hospital wards to multi-hospital GPOs and SSOs. As many SSOs, GPOs and health care organizations have multiple sites and/or members that each have their own unique characteristics, best practices indicate that the first step to facilitate the widespread incorporation of PROMs into the procurement processes of an organization is to establish proof-of-concept at a pilot site. This is especially important given the early stage of PROMs adoption across Canada, as strategic scaling of these initiatives is necessary to garner a critical mass of support within each organization. Once impact and effectiveness have been demonstrated at an initial site, it is then possible

for these practices and policies to permeate other sites within an organization. For these reasons, careful selection of initial sites in which to incorporate PROMs is necessary.

As such, participants noted that there were several factors related to site location and ward type which should be considered in initial adoption and operationalization of PROMs, as listed below:

▶ **Site considerations: Selecting a site for initial implementation of PROMs**

o **Size:** The size of an organization is closely tied to its ability to acquire patient input. Smaller organizations in rural settings are more likely to engage patients on an ad hoc basis, but larger organizations have a better opportunity to leverage data systems to integrate PROMs into procurement.

o **Culture:** The ability to connect with patients depends on the culture of the hospital. In particular, there are important distinctions between the operations of a long-term care/continuous care facility in comparison to an acute care hospital. Organizations with a long-term culture of patient-centeredness are better positioned to lead PROMs (i.e., religious-based hospitals, community hospitals, etc.).

o **Community-based:** Hospital settings may not always be the most appropriate place to engage patients in the procurement process for two primary reasons: first, organizations are trying to reduce amount of time patients are in the hospital; and second, patients are vulnerable when in hospital. For these reasons, PROMs initiatives are more likely to be successful in an environment where the patient is at home recovering or participating in self-care. Similarly, many successful PROMs projects operate within doctors' offices, as patients are often there before and potentially after their appointment and are in a mindset focused on their procedure or intervention.

▶ **Ward considerations: Selecting a ward or unit for initial implementation of PROMs**

o **Acuity:** Acute care wards, such as oncology and the emergency department, are not ideally suited for PROMs implementation, as these wards have shorter-term patient interaction.

o **Significance:** Large, defined services, such as orthopaedics and cardiac surgery, are potential areas where PROMs could be piloted within hospitals. Participants noted that these specialties are considered high-impact by patients and are therefore more likely to receive patient interest and engagement in procurement discussions.

o **Patient Volume**: Wards with lower patient volumes are recommended as sites for implementation of PROMs initiatives that will require clinician assistance/input, as these sites have a lower patient-to-staff ratio. In contrast, for PROMs initiatives that are less reliant on clinicians and require maximal patient input, high volumes wards are ideal.

In addition to choosing an initial site and ward for implementation, the following aspects must also be considered:

▶ **Choosing appropriate products:** Patients should not be expected to have a full understanding of all products, and thus, should be involved with product evaluations on an ad hoc basis for those topics that are specific to their (or their families') needs and personal experiences.

▶ **Choosing your criteria:** When selecting PROMs criteria for consideration during a procurement initiative, it is important to consider the number of criteria, specific metrics and weighting. Participants recommended selecting four to five key clinical criteria for procurement to focus on with patients.

▶ **When to incorporate:** Two key stages for patient involvement in procurement processes are during the request for proposal (RFP) development and the evaluation/validation of the RFP.

▶ **Educate stakeholders:** Education initiatives directed towards both patients (and community members, more broadly), as well as health care and procurement personnel should be implemented to ensure proper understanding of established best practices and required processes to incorporate PROMs.

▸ **Leverage data:** Collection and understanding of patient data is critical and as such, is necessary to enable organizations to appropriately access and utilize this data. Facilitating and promoting the use of advanced data analytics is an important strategy to successfully incorporate PROMs into procurement decision-making. To do so, 1) longer-term data should be collected; 2) opportunitites for data system integration should be pursued; and 3) private sector partnerships should be leveraged.

▸ **Procurement approaches:** Purchasers need to be willing to have open discussions with suppliers throughout the procurement process. To facilitate these types of conversations, purchasers should reframe their approach to facilitate a focused outcomes-based dialogue. One potential method for consideration is a competitive dialogue process using outcomes-based criteria.

4. Change Management Strategies to Incorporate PROMs

The incorporation of PROMs into procurement processes will require change – both small and large – to current practices. Change management strategies will be a critical component of successful implementation efforts. As such, study participants highlighted various change management strategies to be considered by organizations interested in integrating PROMs into their procurement operations.

Of particular importance is the establishment of a culture focused on VBP. Recent policy efforts focused on VBP have been effective at shifting organizational culture and procurement strategy towards total cost of care over a product lifecycle. These and related efforts should continue to be operationalized in hospitals by integrating long-term value metrics into performance incentives at all levels.

In addition to creating a culture of VBP, specific attention should be given to increasing the profile of patient engagement, which can be achieved by:

▸ Establishing clear rules of engagement;
▸ Leveraging clinician involvement in procurement;
▸ Focusing on clinical departments that already emphasize patient engagement;
▸ Building effective relationships with patients;
▸ Meaningfully engaging patients; and
▸ Highlighting success stories of patient engagement.

For organizations that have not yet ventured into the world of PROMs, it is recommended that a staged approach to implementation of patient engagement be adopted. This approach should begin with the incorporation of patient feedback for large, high-impact products in clinical units that already have a culture of engagement and/or VBP.

Engaging patients for procurement activities does not need to be the sole responsibility of one organization, but rather a larger integrated set of stakeholders that contribute to and encourage patient engagement to advance its incorporation within procurement processes. These stakeholders include industry, government, community care, SSO and academic representatives – each with their own unique perspective and role in health care and/or purchasing systems. As such, successful implementation of PROMs requires more broad and deep alliances between all levels of care within the province, including community care, long-term care and acute care organizations, as well as patients from each of these levels.

Abbreviations

BPS: Broader Public Sector
ED: Emergency department
EMR: Electronic medical record
ERP: Enterprise resource planning
GPO: Group purchasing organization
ICU: Intensive care unit
KPI: Key performance indicator
LHIN: Local health integration network
LOS: Length of stay
NCQI: National Surgical Quality Improvement
PESC: Product evaluation and standardization committee
PREMs: Patient-reported experience measures
PROMs: Patient-reported outcome measures
RFP: Request for proposal
SSO: Shared services organization
VAT: Value analysis team
VBP: Value-based procurement

Introduction

Traditional hospital procurement processes are most often conducted at a distance from the patient, whereby hospital clinical teams or procurement leaders set minimum performance criteria and vendors are incentivized only to reach those criteria; however, health systems globally have been transitioning away from this traditional form of price-focused procurement and towards value-based procurement (VBP), where value is a function of price and quality.

With the addition of a quality component in tendering processes, procurement leaders are now developing proxies and metrics to evaluate whether a product or service is truly providing value. Evaluation of value can occur at a variety of stages in the procurement process. Most often, evaluation occurs after the final decision has been made to purchase a product or service, as this product or service is then measured against the expected outcomes.

A newer method of measuring value – incorporation of patient-reported outcome measures (PROMs) – embeds itself in the procurement process and extends beyond the contract to cover a post-intervention/treatment period, if not the lifetime of a patient. Using this method, patients are surveyed or interviewed about their experiences and/or outcomes with a new product during a trial period. Their reviews are then embedded into the evaluation process and directly affect the decision to purchase or not purchase the product. This process is currently being tested in a number of hospital sites across Canada, particularly in British Columbia.

While the opportunity is clear, very little research exists on the process of incorporating PROMs into procurement processes. Further, the frameworks and metrics used by hospitals currently using PROMs are rarely published. As a result, hospitals wishing to transition to a process which involves PROMs are developing them individually. As the Boston Consulting Group (2015) writes, there is "a lack of universal consensus on how best to measure outcomes.[1]"

Research Foci

This study focuses on all aspects of patient participation in tendering processes of health services, products and supplies across Canada. For the purposes of the study, patient participation includes the use of patient-reported measures of both their outcomes (i.e. PROMs), as well as their experiences [i.e. patient-reported experience measures (PREMs)].

In particular, the following aspects of patient participation in tendering processes are addressed:

▸ **Current State:** Patient-related and/or VBP activities currently incorporated into the procurement activities of health care organizations across Canada;

▸ **Barriers:** The challenges of incorporating patient-reported measures of outcomes and experiences in tendering processes;

▸ **Technical Strategies:** Practical aspects related to the logistics and measurement of PROMs, with particular emphasis on information that would be of use to organizations seeking to incorporate these measures; and

▸ **Change Management Strategies:** Different approaches to adopting PROMs in tendering processes, with particular focus on methods of implementation at policy, industry, service provider and patient levels.

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[1] (Boston Consulting Group, 2015)

Methodology

Literature Review & Environmental Scan

An in-depth literature review was conducted to examine all available academic literature focused on best practices to incorporate PROMs into hospital procurement processes. An environmental scan of various reports and websites from health care delivery and support organizations was conducted to examine non-academic literature.

Key Informant Interviews

12 in-depth interviews were conducted with representatives from shared services organizations (SSOs), group purchasing organizations (GPOs) and health care delivery organizations. These representatives were involved in procurement activities at their organizations through a variety of roles, including as frontline clinicians (i.e. nurses), as well as procurement coordinators, managers, directors and advisors. Participants were asked about their experience incorporating PROMs within procurement processes, as well as organizational best practices and models of implementation. Provincial distribution of participants is detailed in the table below.

Province	Number of Participants
British Columbia	3
New Brunswick	1
Nova Scotia	1
Ontario	7

Key Informant Surveys

SSO, GPO and hospital personnel across Canada were contacted and offered participation in an anonymous online survey. The survey was sent directly to 399 individuals and was completed by 62 (response rate=16%). Given the variability of expertise related to survey questions, participants had the option of answering only the questions they felt they had significant enough experience with. As such, the response rates for each question and concept vary.

Most participants were from Ontario, which represented 52% of responses, followed by British Columbia with 30%, Manitoba with 8%, Saskatchewan and Nova Scotia with 4% each and New Brunswick with 2% of responses.

Most of the participants were from organizations larger in size, with 62% of participants representing organizations with over 300 employees.

The job functions of most participants included procurement, contract management and strategic sourcing (each selected by 51% of participants), performance measurement (selected by 49% of participants) and performance improvement (selected by 47% of participants). A complete breakdown of job functions is described in the chart below.

Which job functions do you most often deal with?

Job Function	Percentage
Strategic sourcing	51.0%
Contract management	51.0%
Procurement	51.0%
Performance measurement	49.0%
Performance improvement	46.9%
Purchasing	42.9%
Clinical care	40.8%
Other (please explain)	10.2%
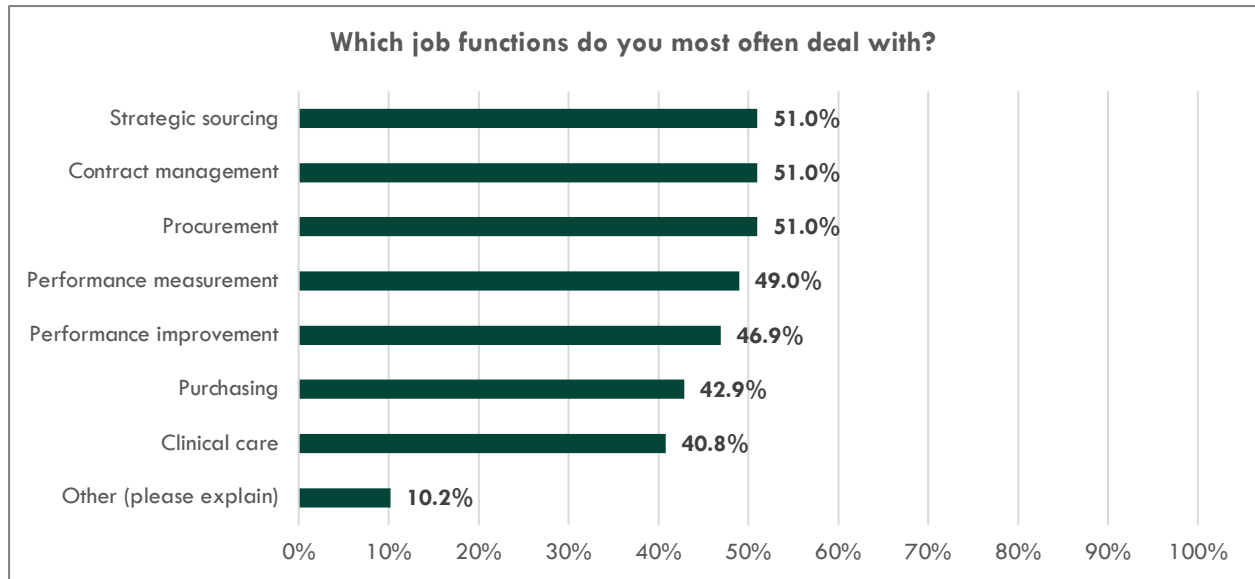
Most participants (50%) were from provider (e.g. hospital) organizations, with the remainder coming from SSOs (34% of participants), "other" (e.g. consultants, advisors and academics) (12% of participants) and GPOs and standards organizations (each with 2% of participants).

1. Current State of PROMs

Chapter at a Glance

▸ Incorporation of PROMs in procurement is not yet widespread throughout Canada; however, there has been increasing focus on VBP throughout the country, of which PROMs could be a key resource. Current VBP strategies include incorporation of clinical/patient criteria, performance measures and patient experience considerations, as well as processes such as competitive dialogue.

▸ As part of this study, organizations were surveyed to assess their current state of PROMs integration into procurement activities and decision-making, as well as future plans to do so, if not currently. Based on our findings, the following three groups were identified:

1) Early adopters: Organizations that are currently incorporating PROMs in procurement

These organizations used the following methods used to incorporate PROMs:

- Prioritization of Patient and Clinician Preferences
- Patient Representation in Formal Roles
- Informal Patient Input
- Patient-Centered Criteria
- Clinicians as a Proxy for Patient Input

2) Followers: Organizations that are not currently incorporating PROMs in procurement, but have future plans to do so

Although these organizations are not currently incorporating PROMs into the procurement process, there is a high degree of interest in learning how this could be done, as well as concrete plans to do so in the future.

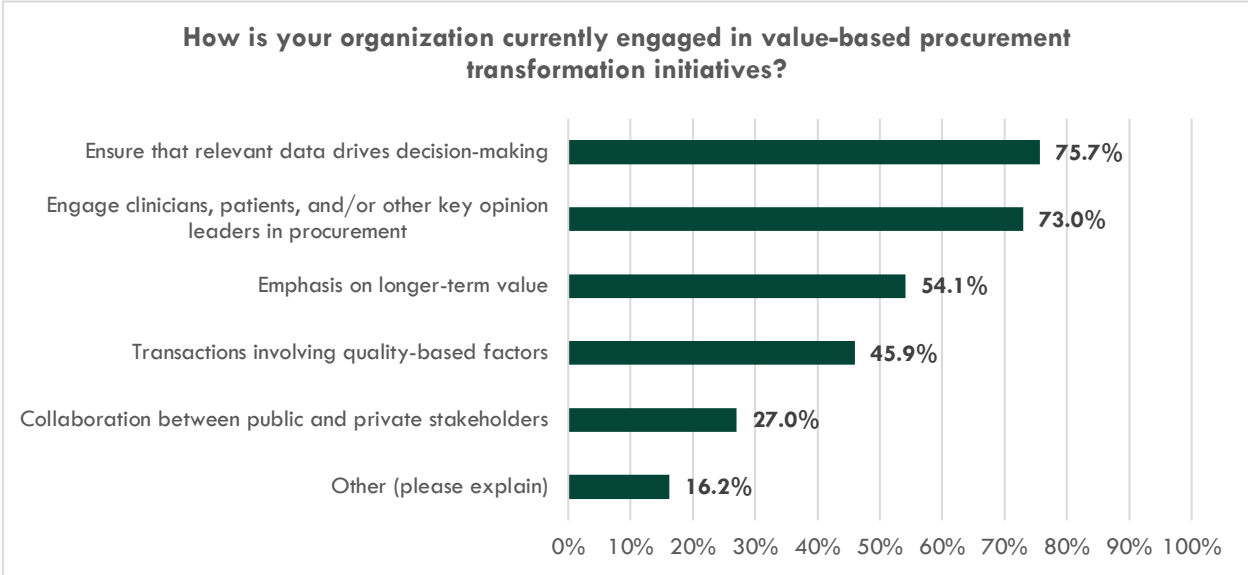### 3) Laggards: Organizations that are not currently incorporating PROMs in procurement

Multiple participants did not have a great deal of exposure to outcomes-based procurement or experience and/or knowledge of how to incorporate PROMs into procurement. Instead, these organizations are focused primarily on clinician input and are typically limited by data capabilities.

1.1 Value-Based Procurement

Incorporation of PROMs in procurement is not yet widespread throughout Canada; however, there has been increasing focus on VBP throughout the country, of which PROMs could be a key resource (The Conference Board of Canada, n.d.).

One participant noted that hospitals are embracing the concept of value (as a function of outcomes/cost), in contrast to being solely budget-focused.

Survey Results: When asked how their organizations are currently involved in **VBP transformation initiatives**, participants responded as follows:

How is your organization currently engaged in value-based procurement transformation initiatives?

Category	Percentage
Ensure that relevant data drives decision-making	75.7%
Engage clinicians, patients, and/or other key opinion leaders in procurement	73.0%
Emphasis on longer-term value	54.1%
Transactions involving quality-based factors	45.9%
Collaboration between public and private stakeholders	27.0%
Other (please explain)	16.2%

Of particular importance is that more than half of participants responded that their organization emphasizes longer-term value; however, less than half of participant organizations currently consider quality-based factors. "Other" responses included general process improvement and development of total cost of ownership models.

The following sections will detail how VBP processes are currently incorporated into procurement.

Clinical/Patient Criteria

A key component of VBP is its focus on clinical criteria, which includes PROMs. On this topic, one participant noted that almost any SSO or GPO now has a clinical component to bridge the gap between the clinical and financial sides of the RFP. As a result, there is *"now a structured environment where price is articulated as a minor factor more formally" (Participant 6)*. For example, one participant noted that their organization has been focused on patient-specific criteria for approximately 10 years, with meaningful successes within the last four years. Further, approximately three years ago, an Ontario SSO had a large consulting firm create a blueprint for hospitals to move to more value-based processes, including how to identify patient-related criteria in procurement.

Stakeholders

Clinical criteria are currently determined by a number of different stakeholders, including clinicians. One participant noted that most SSOs require that clinical experts are involved in every procurement initiative.

Multiple participants noted that clinical representation on RFPs tends to be clinicians that are subject matter experts on the product being procured. For example, for a procurement of advanced wound care items, a wound care specialist would represent their hospital on that RFP, just as eye surgeons would be represented on an ophthalmology RFP.

In addition to clinicians, other stakeholders involved include SSO/GPO representatives and designated groups, such as value analysis teams (VATs) and product evaluation and standardization committees (PESCs), which may have representation from hospitals, SSO/GPOs and the community.

Weighting

Participants indicated that evaluation criteria usually averages at approximately 30-40% price and 60-70% clinical criteria; however, two participants noted that weighting could vary depending on the product, as described in the case study below.

> **Case Study:** At an Ontario SSO, financial and clinical weighting usually start equal and are then adjusted based on a variety of factors that are specific to each product, including:
>
> - **Clinical Sensitivity:** Clinically-sensitive products (i.e. cancer care) have a higher clinical weighting than less clinically sensitive products, as the impact of products (i.e. emotional sensitivity for patient) must be considered when defining weight.
>
> - **Marketplace Familiarity:** Weighting depends on how familiar the marketplace is. For example, if only two vendors respond to an RFP and the hospitals have used both products without problems (i.e. equal quality), there would likely be a higher weighting on financial score.

Performance Measures

In addition to incorporation of clinical criteria, the use of performance-based measures has received attention in both Ontario and Nova Scotia. For instance, at an SSO in Ontario, there was an innovative procurement exercise which introduced quality performance outcomes as part of that process.

Patient Experience as a Selling Feature

The concept of patient experience is critical to VBP in health care and was discussed in the context of procurement by one participant, as detailed in the case study below.

> **Case Study:** An organization in Nova Scotia has had vendors attempt to sell a positive patient experience as part of the value that they offer. For example, Zimmer Biomet – a medical device manufacturer – pitched that patients would have the best **outcome** possible, although for a higher upfront cost. In this arrangement, the organization would pay a flat rate for the **patient experience.** Of this process, the participant stated, *"instead of us [SSO] buying a knee implant for $6,000 and then being responsible to treat the patient for their experiences over the next ten years if they have to come back ten times because it was uncomfortable or [they] had infection or had to had a revision done, Zimmer [Biomet] would say to us … 'you will pay $10,000 for that knee implant and we will, you will not pay a cent for the rest of that patient's care related to that knee.' And so they are then definitely trying to design the knee that's going to have the least cost to them which would then translate to the best patient outcome"* (Participant 6). Zimmer Biomet has successfully used this approach elsewhere in Canada.

Competitive Dialogue

As described in the *BPS Primer on Innovation Procurement (Interim)* report, competitive dialogue is a VBP process that allows the procuring organization to thoroughly discuss each aspect of the procurement with suppliers prior to specifying the requirements and prior to an invitation to submit their full and final proposals. This process was discussed by one participant based on their experience, as described in the following case study.

> **Case Study:** Outcomes- and value-based criteria centered around patients, community and quality are determined and used to create a competitive document which is then issued to the marketplace. Once issued, this participant suggested that the conversation may begin with a discussion similar to the following:
>
> *"We [the hospital] know we do this many procedures in this program and historically, we purchased these types of goods and services to support that program; but strategically, we're trying to achieve these outcomes. So, supply market, what ideas do you have in terms of innovative ways of meeting our commitment to the community and the Ministry [of Health and Long-Term Care] and in reaching our objectives?" (Participant 12)*
>
> Interested suppliers that have an innovative solution to offer then identify themselves and is followed by dialogue using competitive documents focused on achieving the desired outcomes. Typically, one round of dialogue builds the solution to the point where the supplier, consortia or partnership submit a final solution in response to a formal RFP.

1.2 PROMs in Procurement Processes

As part of this study, organizations were surveyed to assess their current state of PROMs integration in procurement activities and decision-making, as well as future plans to do so, if not currently. It should be noted that for the purposes of this study, **patient-oriented measures** – although not necessarily true PROMs – were also discussed.
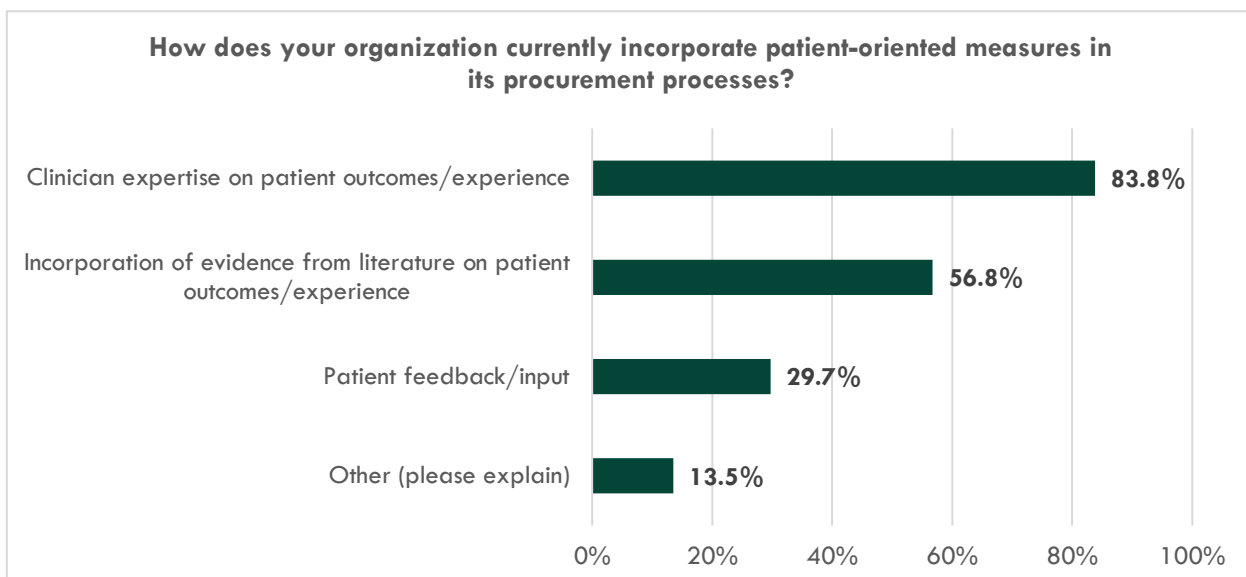
Based on our findings, the following three groups were identified:

- ▸ **1) Early adopters**
- ▸ **2) Followers**
- ▸ **3) Laggards**

In the following section, these three groups will be further explained.

Survey Results: Participants were asked how their organizations currently incorporate **patient-oriented measures in procurement** and the following responses were collected:

How does your organization currently incorporate patient-oriented measures in its procurement processes?

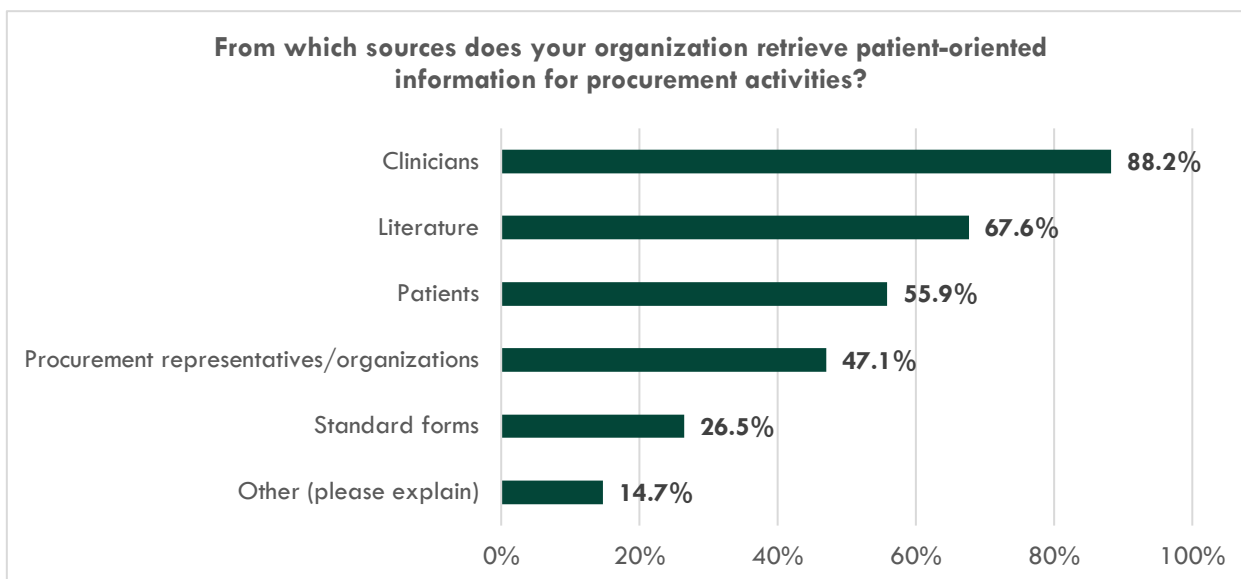| Category	Percentage
Clinician expertise on patient outcomes/experience	83.8%
Incorporation of evidence from literature on patient outcomes/experience	56.8%
Patient feedback/input	29.7%
Other (please explain)	13.5%

These responses indicate that most participants (83.8%) identify that their organization currently considers patient-oriented measures indirectly through clinician input, while less than a third (29.7%) solicit direct involvement of patients in the procurement process. Participants who responded "Other" indicated that they currently do not use patient feedback for procurement purposes.

1) Early adopters: Organizations that currently incorporate PROMs into procurement processes

Multiple participants noted that their organizations currently incorporate patient-related feedback into procurement processes to varying degrees.

For over one third of participants (35.1%), PROMs are a new phenomenon that appeared within their organizations during the past year, while 43.3% of participants started integrating patient-oriented measures in tendering within the last five years and 21.7% of participants started adopting PROMs into procurement processes more than five years ago. These findings aligned with the phase of implementation that participants indicated their organizations were in with regards to transitioning from traditional procurement practices to incorporation of PROMs, as 21.6% of participants identified their organizations as being in the planning/pre-implementation phase, with 32.4% and 46.0% of participants responding that their organizations are in the initial implementation (pilot) and scaling (wide-spread implementation) phases, respectively.

Survey Results: Participants were asked to identify the **data sources** their organizations use to retrieve patient-oriented measures for the purposes of procurement and the following responses were collected:

From which sources does your organization retrieve patient-oriented information for procurement activities?

Source	Percentage
Clinicians	88.2%
Literature	67.6%
Patients	55.9%
Procurement representatives/organizations	47.1%
Standard forms	26.5%
Other (please explain)	14.7%

These findings indicate that the most common source of patient-oriented information is clinicians (as indicated by 88.2% of participants), rather than patients (as indicated by 55.9% of participants). "Other" sources of information included families, other organizations and vendors.

Methods used by Early Adopters to incorporate PROMs are:

▸ **Prioritization of Patient and Clinician Preferences:** One participant stated that at their organization, clinicians have never been refused to choose a product they believe in, as although cost is a major factor, in most circumstances, products will be chosen based on patient outcomes. For example, at this participant's organization, a new product was trialed and based on patient and nurse input, the product was not chosen.

▸ **Patient Representation in Formal Roles:** Multiple participants indicated that their organization involves patients and in some cases, family members, in the procurement process through formal roles on product selection committees, evaluation panels and VATs, as well as attendance at procurement-related meetings.

One participant stated that within the last 18 months, their organization has started to incorporate patients on specific committees to evaluate products used directly on patients. For example, this organization has an infection control/wound and skin committee, which includes a **Patient Advocate,** that investigates any infection control-related matters, such as a product change or new product.

Similarly, another participant indicated that over the past three years, patients have become increasingly involved in the procurement process as **Patient Experience Partners (PEPs)** after an experience at the organization, either with a family member or themselves. For example, in June 2017, a recommendation was made to implement a pilot project in which PEPs would trial and evaluate isolation gowns to be worn by patients and families.

▸ **Informal Patient Input:** Some organizations involve patients and their families in less structured, informal roles.

For instance, one participant indicated that family members may be involved as advocates for long-term care patients, especially for products that have comfort measures, such as incontinence products.

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Another participant indicated that at their organization, patients are engaged in procurement processes on an ad hoc basis depending on the product. For example, if the product involves patient contact (i.e. a cream or brief), the patient will be interviewed. One participant gave the following example:

> *"One of the issues with the briefs was the nurses were changing the beds three times through the night shift with the new product. So, before that we never had these issues and therefore, the patient was uncomfortable - they were cold, they were, you know, they're in a wet bed. So, we do talk to the patient - 'tell us, have you noticed a difference?' and some people say 'no, it's just fine, I don't see any difference.' So we just don't do one [a product change] … if we're changing a product and we go and ask the patient to use the product … 'what is your feedback? Is it comfortable? Does it work for you? Is it the same as the last product? Do you have anything to say, good or bad?' We keep it simple and they'll tell you." (Participant 2).*

In this way, the organization has made changes based on patient input, as described in the following case study.

Case Study: At an Ontario rehabilitation facility, concerns with patient briefs arose when the product was trialed based on issues expressed by patients and nursing staff. For example, it was known that the patients were not comfortable, the briefs did not fit properly and leakage occurred. It became clear that the product was a failure from both the patients' and nurses' perspectives. It was then revealed that patients and staff from other organizations were experiencing similar issues. As a result, the product was no longer used.

In terms of more broad, general patient input, resources exist in British Columbia for patients' to provide feedback, including the:

o **Patient Safety Learning System:** for patients to enter complaints about products, services and experiences
o **Patient Quality and Care Office:** to voice patient concerns

Furthermore, throughout the province, patients are encouraged to provide feedback through mechanisms such as a hospital communications account.

▶ **Patient trials:** Patient trials, especially for clinically sensitive products, are another way that patient feedback is incorporated into procurement processes, as described in the following case study:

Case Study: A participant recalled that a Nova Scotia organization went to market for cataract lenses and *"as part of that RFP process, the physicians in all of the sites where we [SSO] deliver that service have all trialed on patients the products ... So, we actually do incorporate patient trials into very clinically sensitive decisions." (Participant 6)*

▶ **Patient-Centered Criteria:** Certain organizations in Ontario and Nova Scotia are leading in the use of patient-centered criteria. For example, one participant from Ontario noted that for new product trials, the number one criterion considered at their organization is **patient satisfaction**. Similarly, a participant from Nova Scotia indicated that the province has, for many years, included product **suitability for the expected patient outcomes** in procurement processes.

One method through which patient-centered criteria are decided upon is via group consensus regarding the characteristics that go in to the RFP. In this situation, nominated individuals determine criteria in a process facilitated by the SSO.

▶ **Clinicians as a Proxy for Patient Input:** Multiple participants indicated that their organizations now incorporate patient-related feedback via clinicians to both recommend and evaluate products using:

- o **Academic Literature:** At several hospitals, clinicians incorporate academic literature into product selection discussions, as discussed in the case study below.

> **Case Study:** At an organization in Ontario, there have been two key situations when the organization did not want to switch to a different product that was being trialed due to what was discovered while researching the product. To ensure the product was not chosen, nurses approached the chief nursing officer with their concerns. The matter was escalated to the CEO and procurement experts from the organization and as a result, the change was not made.

- o **Vendor Literature:** Part of many organizations' product selection committee meetings include a critical evaluation of vendor literature by clinicians to assess the patient-related metrics.
- o **Outreach to Other Clinicians:** Many clinicians have strong relationships with clinicians from other organizations and several procurement departments have taken advantage of these linkages by encouraging sharing of anecdotal evidence of specific products and their impact on patient experience. Of this process, one participant noted, *"Physicians might do research from other places where products have been trialed … to try to understand the evidence." (Participant 6)*
- o **Indirect Patient Feedback:** Clinicians naturally collect patient feedback during their clinical interactions and several organizations are now taking advantage of this data collection for product selection activities by encouraging clinicians to comment on patient experience and feedback of products. Of this process, one participant stated that if *"there's some impact on the patient or feedback from a patient that is always brought back to the table… If it worked well for a patient they might be aware of that … and they would probably consider that" (Participant 8).* An example of this clinician-driven patient feedback is described in the following case study:

> **Case Study:** For the recent implementation of a contract in Nova Scotia, clinicians approached supply chain representatives with feedback that a boot had caused skin irritation for patients using pictures they had taken of the patient. With this information, procurement personnel were able to drive an investigation into the performance of the product.

2) Followers: Organizations that currently do not integrate PROMs into procurement processes, but have future plans to do so

Multiple participants indicated that although their organizations are not currently incorporating patients into the procurement process, there is a high degree of interest in learning how this could be done, as well as concrete plans to do so in the future.

For example, one participant did a study on VBP in health care to understand how it could be implemented in New Brunswick and high-level key stakeholders from the province indicated their interest in doing so. As a result, the province is hoping to implement key pilot projects to incorporate PROMs into the RFP process over the next couple years. Another example is in British Columbia, in which there is a move to do post-implementation product evaluations in hospitals. Further, an Ontario hospital has considered focus groups for patients to update them on procurement processes, but this has not yet been implemented for unknown reasons.

3) Laggards: Organizations that currently do not incorporate PROMs into procurement processes

Multiple participants did not have a great deal of exposure to outcomes-based procurement or experience and/or knowledge of how to incorporate patients into procurement. For example, despite what other participants indicated regarding Canada's interest in VBP and the importance of patient outcomes in procurement, one participant stated that, *"cost is a big driver across Canada. I don't care what anyone says - you put the elephant in the room, cost is your major factor" (Participant 2).*

Similarly, three participants - one from Nova Scotia and two from Ontario - indicated that there are significant gaps in incorporating patients in the procurement process, as one participant stated,

"I think we say it [that patients are incorporated into procurement]. I think there's a great disconnect between what we put out there sometimes and what we actually live every day…We say we have patient-centered care in a lot of our facilities and I don't find that to be true. So, I think, 'shame on us.'" (Participant 2)

Another participant commented on the procurement process in relation to its lack of patient involvement, stating that,

"At the end of the day they're [patients] the ones who are going to have this catheter put in or this hip replacement … and nobody's ever consulting them to say 'hey, you know, we just did a hip replacement with a Striker product' … to better understand what the outcome was because in the industry, it's kind of funny because vendors come at you and they'll say 'oh, look at all this really cool literature - my product is the second coming of God'. Well, you know, most of these papers are written by surgeons or associates that are on the payroll, anyway, so, what are they going to say - something adverse about the product? No. But how many vendors come at you with something like you're trying to do right now [PROMs], right? The answer is zero." (Participant 5)

Participants discussed that the current state within their organizations is focused primarily on clinician input and is limited by data capabilities, as further described below.

▸ **Clinician Input:** In terms of determining clinical criteria and outcomes, multiple participants from British Columbia, Nova Scotia and Ontario noted that their organizations rely on the input of frontline clinical subject matter experts that will use the product; however, patients are not necessarily a stakeholder engaged in this process. For example, in an Ontario hospital, clinicians evaluate products in terms of their personal usage of the product (i.e. how the product works and whether it is easy to use); rather than from the patient perspective. Similarly, one participant noted that for products that are less patient-specific, such as IV needles, the most important criteria are nurse-related (i.e. whether that IV needle enters smoothly, for example).

▸ **Data Collection:** In terms of data collection regarding patient outcomes, some hospital quality departments are currently gathering data, but not maximizing its potential uses, with one participant saying *"data is just data. We haven't pulled it together to say 'okay, what's the issue? What's the outcome?'" (Participant 9).* One participant noted that their organization's use of data is improving due to work from the Canadian Institute for Health Information and other organizations, such as Patient Canada; however, there is much progress to be made. Two participants stated that their organizations collect and store patient data, such as product serial numbers for recall purposes; however, the data collected is administrative, rather than related to patient outcomes.
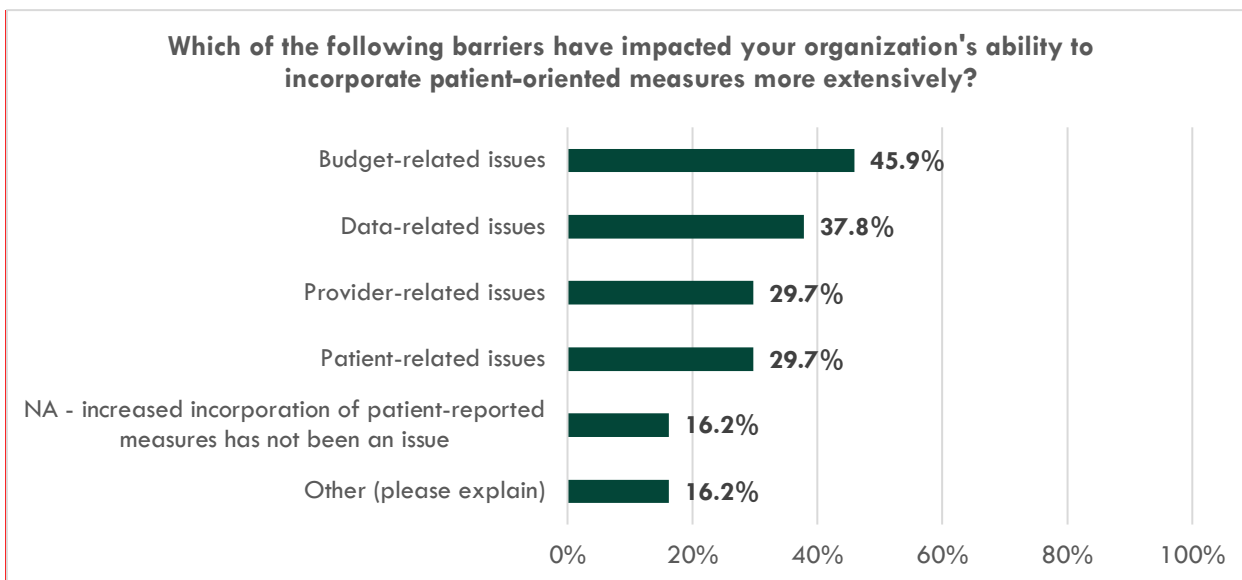
2. Barriers to Adoption of PROMs

Chapter at a Glance

▶ In order of importance, the following barriers to adoption of PROMs were noted: budget-, data-, stakeholder- and patient-related issues.

- o From a budget perspective, the key issue presented was related to the additional resources that would be required to properly incorporate, collect, measure and assess PROMs. The most notable resource requirements include personnel and data infrastructure costs.

- o Several participants spoke of the challenges associated with connecting the various stakeholders required for purchasing decisions, as having clinicians, administrators, procurement staff and patients make decisions collectively is relatively new and still being optimized.

- o Another concern raised by participants was providing patients, and therefore the community, detailed financial data on the costs of care and supplies.

- o Numerous barriers currently exist to collection of advanced patient outcome data, namely related to data integration, product traceability and data sharing.

- o There are also numerous patient-related factors to operationalizing PROMs, especially related to their engagement, time spent in the health care system and ability to comprehensively understand the health care system.

- o Barriers caused by or related to current policy were the final significant barrier to adoption of PROMs. These barriers were related to contract timelines and flexibility; a lack of understanding and focus on value; and outdated thresholds.

Both interview and survey participants spoke about the barriers experienced within their organizations, as well as the broader health care sector, when operationalizing PROMs into procurement processes.

Survey Results: When survey participants were asked about the **barriers** preventing their organization's decision to incorporate patient-oriented measures into its procurement processes, the following responses were collected:

Which of the following barriers have impacted your organization's ability to incorporate patient-oriented measures more extensively?

Barrier	Percentage
Budget-related issues	45.9%
Data-related issues	37.8%
Provider-related issues	29.7%
Patient-related issues	29.7%
NA - increased incorporation of patient-reported measures has not been an issue	16.2%
Other (please explain)	16.2%

These findings indicate that the primary challenge to incorporation of PROMs is related to **budget**, while just over 16% of participants responded that their organizations did not experience barriers to incorporation of PROMs. "Other" responses included limiting regulations, the novelty of PROMs and the time and resources required for feedback activities.

Survey Results: When participants were asked to rank the **barriers/challenges** to incorporating patient-oriented measures into procurement processes in order of difficulty, the following responses were collected:

Barriers/Challenges to Incorporating Patient-Oriented Measures into Procurement Processes	Average Ranking of Barriers (1=most challenging, 10=least challenging)
Availability of data	4.5
Financial constraints	4.6
Lack of stakeholder engagement	4.6
Lack of organizational (i.e. managerial) support	4.7
Non-financial resource requirements (i.e. physical, human, etc.)	4.7
Logistics of data collection	4.8
Identification of proper measurement tools	5.1
Reliability of data	5.5
Privacy concerns	6.3

Privacy concerns was ranked as "least challenging" and availability of data was ranked as "most challenging." These findings are particularly interesting, as the ranking for each of these challenges ranges narrowly between a low of 4.5 (availability of data) to a high of 6.3 (privacy concerns), which indicates that none of these factors are significantly more (or less) challenging than others, on average.

During the interview portion of this study, participants were able to delve deeper into the barriers faced by their organization when seeking to incorporate PROMs into procurement processes. These concepts are further described below.

2.1 Competing Stakeholder Priorities

Several participants spoke of the challenges associated with connecting the various stakeholders required for purchasing decisions, as well as **gaining consensus** amongst these groups given competing priorities. Participants commented that having clinicians, administrators, purchasing staff and patients make decisions collectively is relatively new and still being optimized.

In particular, one participant added that the challenges associated with gaining consensus are compounded given the trend of centralization for SSO and GPO models. As these SSOs/GPOs continue to expand in size and membership, the number of stakeholders who could potentially be involved in purchasing discussions increases. Of this challenge, one participant stated,

> *"This doctor will have [a perspective], the nurse will have a perspective, the porter will have a perspective … plus the staff who support the research. What if the province says 'let's have one SSO'?" (Participant 9)*

Scheduling

Clinicians

The most notable challenge due to competing stakeholder priorities was **clinician engagement**, which can be critical to receive patient-related feedback. Participants noted that engaging clinicians (particularly physicians) is often a difficult process due to scheduling challenges, time constraints and variance. Speaking to this, participants stated,

> *"**Procurement activities often fall outside of physician responsibilities and accountabilities and are seen as optional.** One of the biggest challenges here is time with the clinicians because they are here at work every day to serve patients. They're not paid to attend meetings during the day. Procurement, clinical engineering, clinical administration, nurses, like a lot of these, they might have time throughout their day that they can attend meetings and that's part of their job. But the doctors - it's not in their job responsibility." (Participant 3)*

> *"[Clinician] workload is a major barrier to [patients] participating **because for a lot of clinicians, their annual evaluation has nothing to do with whether or not they participate in a purchasing process** and no one ever evaluates to find out how much knowledge they actually have on purchasing." (Participant 11)*

As a result of physicians' limited availability throughout the work day, one participant noted that it is common for procurement activities involving clinical input to take place in the early mornings to accommodate the physician's schedule; this participant stated,

> *"We try our best to get as much clinical input as possible and that sometimes can be challenging as well because of the logistics of that. You have to work around physician's work time, so a lot of work is done very early in the morning." (Participant 12)*

Although this is more ideal for clinicians, this schedule presents a challenge when trying to include patients, as early morning meetings are more difficult for patients to attend.

Procurement staff

As is the case for clinicians, procurement staff are also very limited in terms of any additional time available to commit to the organization and management of new procurement initiatives, including increased patient engagement efforts.

Disconnect with the Private Sector

Another challenge to implementation of PROMs is that although the private sector has an important role to play in collecting patient feedback, there is currently a **lack of connection** between health care organizations and private sector partners, with one participant stating,

> *"**Vendors have the most capability [to influence patient engagement] really with the business intelligence and capabilities they have**, but they are disconnected from the patient experience often. They are involving patients to the extent they can in the R&D (research and development) side of things and they put their products on the market, but they have no access to patient outcomes and we [procurement staff] have access to all the patient outcomes, but we have all the struggles with connecting it back to the vendors. So, there is a void or a gap in information sharing." (Participant 6)*

Participants noted that this disconnect is due to a **lack of trust** between the public and private sectors in health care, as there can be a perception that the interest of the public and private sectors are not always well-aligned, especially since the private sector is highly concerned with profit. Some participants noted that this perception was flawed, but pervasive, nonetheless, with one participant stating,

> *"There's a lack of trust between the private sector and the public sector. And so, entering into some sort of agreement, if you're a vendor and you're trying to sell your product to a hospital, to a LHIN (local health integration network), to the broader public service (sic), **generally there isn't a belief that your goals may overlap with their goals**. The assumption is always that they're there to make money - it's the only reason why you're [the private sector] at the table and you don't care about the experience of patients; you don't care about the experience of health care practitioners; you don't care about the challenges that the public service has to face in delivering these myriad of health services… If a private company comes to the public sector and says 'if we enter this arrangement, we do more than just sell you a product - we also deliver a service, we also run this trial to collect real world evidence', there's no trust there to build the relationship that would be required to have that kind of partnership." (Participant 1)*

In addition to a lack of trust, this participant noted that private sector partners, including suppliers and manufacturers, have the capabilities to collect, analyze and utilize patient outcome data related to their products; however, **convincing government to accept private sector data is currently a challenge.** Of this barrier, this participant stated,

> *"I know for sure that that's [convincing government] a frustration of many of our members because they know, in their own clinical trials and their own testing, what their product can do, how it can perform, but there's no Ontario-specific way of demonstrating that." (Participant 1)*

2.2 Data Availability

A key opportunity highlighted by participants was the potential for advanced data analytics to facilitate patient engagement; however, numerous barriers currently exist to collection of advanced patient outcome data, as one participant summarized, *"I think it's collecting the data and collecting good quality data that's the biggest challenge in the work we do." (Participant 3)*.

The key barriers related to data availability discussed by participants – **data integration, product traceability and data sharing** – are described below.

Administrative Burden of Data Integration

Many participants discussed that it is a major administrative burden for clinicians to report ad hoc patient feedback on a specific product to the purchasing team. This challenge exists because most electronic patient record systems do not automatically integrate with purchasing databases since not all medical device manufacturers are using the same barcoding standards. As a result, the clinician must manually record any product-related information; however, given their limited time, most of the feedback does not get translated to the purchasing team and is therefore not included in future contracts. Of this challenge, one participant stated,

> *"Many of the manufacturers of medical equipment or supplies aren't currently using standards for barcoding that allows you to easily take information that might be on the box or the package and integrate it into your*

*tracking system. They haven't widely adopted GS1 data standards. So, you end up manually keying in serial numbers or creating your own barcode for products... If you're at the bedside delivering care or in a clinic providing care, you're going to be moving on to your next person and trying to figure out how to take some time later to go back to that situation and document what you've observed for **a process that's outside of the normal clinical reporting process**. So, they're documenting their patient's experiences in their charts, but those systems don't connect to our administrative systems. So, it's almost like they have to repeat work twice. So, I think one of our barriers is that we don't have integrated systems." (Participant 6)*

Product Traceability in Relation to Patient Outcomes

Participants also felt that enhanced data systems would allow for product traceability, which would then enable commissioning and other types of innovative contracting, with one participant stating,

*"Some of it is traceability of product use to patient trackable outcomes — so, just limitations of our overall information management continuum from the serial number of the part used on the patient to the patient's identity, and then their return visits for checkups. **We don't have enough traceability in the supply chain to connect the dots between the charting history of a patient and the products that were used on them.**" (Participant 6)*

Data Sharing

One participant noted that there is currently a void in sharing performance metrics, as vendors have an advanced understanding of such metrics, but do not freely share information with health care organizations.

2.3 Patient-Related Factors

There are also numerous patient-related factors to operationalizing PROMs, especially related to their engagement, time spent in the health care system and ability to comprehensively understand the health care system, as further discussed below.

Engagement

Although numerous participants were able to identify strategies to successfully engage patients (See*: 4.2 Developing a Culture of Patient Engagement*), one of the greatest barriers discussed in this study was the issue of attracting patients to participate in procurement activities, with one participant stating, *"**I really don't know how you get the patient themselves at the table**. I don't have experience with that to see what works." (Participant 9)*

Several barriers related to patient engagement, which are further described below, were identified:

▸ **Willingness to Provide Information:** Some participants discussed how patients can be skeptical of providing information to hospitals, as patients may be concerned that their feedback could be tracked back to them or that it would be used for cost-cutting purposes rather than to improve care.

▸ **Reimbursement Expectations:** In some cases, patients expect to be paid or reimbursed for travel as part of their commitment to participate in procurement activities, with one participant stating that patients are of the mentality that *"'I'm not spending all this time building requirements in my own time that nobody is paying me for.'" (Participant 12);* however, given the cost pressures all hospital departments are facing, many do not have a budget for patient honoraria, even when a long-term cost savings case is made.

▸ **Patient Interest in Procurement:** Another barrier is attracting patients for more basic purchasing decisions, such as bandages, as departments and specialties that are perceived as being more

prestigious or interesting have a greater opportunity to gain patient input. Of this challenge, one participant stated,

> *"If you think of something jazzy that you want people to engage on, like interventional cardiology and whether or not they'll be able to get their heart attack managed here in town – you'll have lots of people show up. You ask them what kind of bandages and diapers or sutures they want – I have no idea what participation looks like." (Participant 4)*

▶ **Finding a Representative Sample:** Another consideration is whether patients who are involved in procurement activities can be considered representative, with one participant stating,

> *"One thing that I am always worried about and, I think **in public health we tend to focus on, is who are the people that show up and are they representative samples? They're generally not**. They're the motivated people with spare time. So, people that are struggling to meet their basic needs – they're not there. So, how do you gather appropriate input from a broad span of community members? (Participant 4)*

▶ **Scalability of Engagement Strategies:** Another participant commented that scaling patient engagement strategies across a health system is challenging because templates for engagement at one organization are unlikely to translate to other organizations, as the nature of each purchasing decision requires a custom approach. Of this challenge, one participant stated,

> *"We would not be able to just use cookie cutter templates and processes. You actually have to engage with people and collaborate more to understand the aspects of the procurement that drive patient experiences and outcomes. So, less cookie cutter and more collaboration and engagement would be necessary. So, I think that does take time on both the procurement side and the clinician side." (Participant 3)*

Additional Time in the System

Some concerns were raised that engaging patients in the procurement process runs counter to a greater hospital desire to reduce the amount of time patients spend in hospital, with one participant stating, *"**We're trying to reduce the amount of time that patients are actually in the hospital, so when they are in the hospital they're very vulnerable and not in a state to participate in anything other than getting better.**" (Participant 12)*

Ability to Understand Complex Systems

Finally, some participants raised questions about whether or not patients have the understanding required to comprehend the entirety and complexity of the health system, with participants stating,

> *"Our Patient Experience Partners are volunteers and they had come from a variety of backgrounds, not necessarily health care. So, sometimes if they get involved in too broad of an event or a project, they get distracted from what we're really trying to accomplish." (Participant 7)*

> *"I think some of the challenges will be what their personal experience was and it may have been positive, it may have been negative, but it might just be a one-off, as well. Sometimes they [patients] get focused on that. So, I think **they don't always see the broader picture when they're providing their opinion or input** into something." (Participant 8)*

2.4 Policy

Barriers caused by or related to current policy were the final significant barrier to adoption of PROMs. These barriers were related to **contract timelines and flexibility; a lack of clarity and focus on value; and outdated thresholds,** as further discussed below.

Timelines

A barrier to incorporation of PROMs is the short timeframe that hospitals, GPOs and SSOs have to complete a contract, especially for large purchases of capital equipment, due to limitations of funding dates, with participants stating,

> "It's, 'everyone, here's the budget, and here's what you're approved to go buy, so, now go work on it'. And then procurement and the clinical programs say 'now that we've got this notice we have seven months to do this whole RFP process and get all this stuff in' and **so everything is geared towards finance** versus, 'here's the money - how long does a procurement process take to get this equipment in and up and running?'" (Participant 3)

> "A lot of equipment funding is given out on an annual basis and usually those decisions are made part way through the year, and so **a lot of our procurements for large capital types of investments come on very short timelines where we don't have the same capacity to incorporate things like clinical trials or patient experiences because the way that the planning and funding processes work are on such short cycles** that it makes it challenging to have a clinically robust process." (Participant 6)

The significance of these challenges depends on each product, as some consumable products, such as bandages or needles, require much less feedback time than implants or other longer-term products. For example, one participant stated that for some products, such as hernia meshes, "you won't see the outcome for … maybe a year." (Participant 5).

Flexibility

In addition to challenges with funding timelines and contract length, one participant discussed that current procurement policies are highly prescriptive and limiting, which can make it challenging to engage in innovative procurement practices, such as incorporation of PROMs. Of this, one participant stated,

> "Canada-wide, from what I've seen, is it's very top-down, prescriptive - this is the program, these are the pieces, this is how you put it together, this is the reporting, this is how you measure – and often that may or may not meet the needs of the community. It may not meet the needs of the providers in the community." (Participant 4)

Lack of Understanding

In Ontario, a thorough understanding of the Broader Public Sector (BPS) Procurement Directive ("the BPS Directive") is critical to incorporate PROMs into hospital tendering processes; however, one participant noted that there is currently a high degree of misunderstanding regarding what is and is not permitted by the BPS Directive. For example, although many participants agreed that the BPS Directive does not prohibit vendor relationships or patient feedback mechanisms, there exists a pervasive perception that it is restrictive of relationship-building amongst industry partners, which has inhibited the incorporation of PROMs.

As a result of this lack of understanding, there is concern and conservatism amongst buyers so as to be completely confident that they are operating within the BPS Directive. Of this perspective, one participant explained, "They're [buyers] not going to even try. They're not going to, you know, read closely and say 'okay, well that's not explicitly not permitted'" (Participant 1).

Lack of Mandate

One participant noted that there is nothing in procurement legislation that forces organizations to follow VBP processes, which would include PROMs, and therefore, organizations are less likely to do so, partially due to a lack of understanding as to how.

3. Technical Strategies to Incorporate PROMs

Chapter at a Glance

Participants noted that there were several factors related to site location and ward type which should be considered in early adoption of PROMs, as listed below:
- o Site considerations:
  - Size
  - Culture
  - Community-based
- o Ward considerations:
  - Acuity
  - Significance
  - Staffing
  - Patient volume

▶ Patients should not be expected to have a full understanding of all products and thus, should be involved with product evaluations on an ad hoc basis for those topics that are specific to their (or their families') needs and personal experiences.

▶ When selecting PROMs criteria for consideration during a procurement initiative, it is important to consider the number of criteria, specific metrics and weighting.

▶ Two key stages for patient involvement in procurement processes are during the RFP development and the evaluation/validation of an RFP.

▶ Education initiatives directed towards both patients (and community members, more broadly), as well as health care and procurement personnel should be implemented to ensure proper understanding of the required processes to incorporate PROMs.

▶ Collection and understanding of patient data is critical and as such, it is necessary to enable organizations to access and utilize this data.

▶ Facilitating and promoting the use of advanced data analytics is an important strategy to successfully incorporate PROMs into procurement decision-making processes. To do so, 1) longer-term data should be collected, 2) opportunities of data system integration should be pursued and 3) private sector partnerships should be leveraged.

▶ Purchasers need to be willing to have open discussions with suppliers throughout the procurement process. To facilitate these types of conversations, purchasers should reframe their approach to facilitate a focused, outcomes-based dialogue. One method of procurement that is focused on open dialogue is a competitive dialogue process using outcomes-based criteria.

As discussed in the previous section, it is evident that there are important challenges to consider when operationalizing PROMs in procurement. In this section, technical strategies to overcome these stated barriers will be discussed.

3.1 Selecting Early Adopter Sites

As many SSOs, GPOs and health care organizations have multiple sites and/or members that each have their own unique characteristics, best practices indicate that the first step to facilitate the widespread incorporation of PROMs into the procurement processes of an organization is to establish proof-of-concept at a pilot site. This is especially important given the early stage of PROMs adoption across Canada, as strategic scaling of these initiatives is necessary to garner a critical mass of support within each organization. Once impact and effectiveness have been demonstrated at an initial site, it is then possible for these practices and policies to permeate other sites within an organization. For these reasons, careful selection of initial sites in which to incorporate PROMs is necessary.

As such, participants noted that there were several factors related to site location and ward type which should be considered in initial adoption and operationalization of PROMs. Organizations looking to engage in PROM activities should consider the following suggestions to select sites and wards that are more likely to have a positive response to incorporation of PROMs and thus, capture quick wins.

- ▶ **Selecting a Site:**
  - ○ **Size considerations:** Participants noted that the size of an organization is closely tied to its ability to acquire patient input. Pros and cons of large and small organizations are indicated below.
    - ▪ Large organizations:
      - More staff to become involved in procurement processes, as described below.

        "In the bigger organizations, there is more hope for them to [operationalize a patient engagement strategy] than in a smaller facility ... Larger centers, because they have more staff, they have more people for education, they have more people who can get involved and take it to the next level." (Participant 11)

    - ▪ Small organizations:
      - Quicker decision-making
        - ○ Example: One participant described a situation in which there was a problem with a purchased product and speed at which the problem was solved due to the small hospital size.

          "Well, we're a very small hospital, so, we went to our chief nursing officer who went to the CEO. The CEO got ahold of who helped brings in the product, which is part of our finance here because we're so small, and she hauled them right in. They were here within 24 hours." (Participant 2)

      - Closer relationship with patients and their needs, as indicated below:

        *"It's a small hospital and every dollar counts and we want to be known as doing really good patient care, and we want to be known as being very fiscally responsible, but **we want to be known more so for giving really excellent patient care**." (Participant 2)*

        *"Because we're small - we only 134 beds - and we have mostly an aging population, **we are very connected to our patient needs** and we are very at the bedside with the patients." (Participant 2)*

Despite the claims that smaller hospitals have a more natural affinity towards focusing on patient engagement and value, there are also some challenges when trying to operationalize a patient engagement strategy which adversely affect small hospitals. In particular, smaller hospitals are not as well-equipped to experiment with newer, potentially innovative products.

> **Key Finding:** Large academic hospitals should be tasked with experimenting with new, innovative projects, while small community hospitals should focus on the products that have the most patient impact. Lessons from each hospital group need to be shared with each other.

o **Consider culture:** One participant noted that the **ability to connect with patients** depends on the culture of the hospital. For example, a participant noted that there are important distinctions between the operations of a long-term care/continuous care facility in comparison to an acute care hospital.

o **Connect outside of hospital:** Hospital settings may not always be the most appropriate place to engage patients in the procurement process for two primary reasons: first, hospitals are trying to reduce amount of time patients are in the hospital; and second, patients are vulnerable when in hospital. For these reasons, one participant suggested that PROMs initiatives are more likely to be successful **in an environment where the patient is at home recovering or participating in self-care**.

Similarly, another participant advised that many successful PROMs projects operate within **doctors' offices**, as patients are often waiting there before and potentially after their appointment and in a mindset focused on their procedure or intervention.

Further, one participant predicted that purchasing will becomes less hospital focused and more **community focused** as patients shift into the community to receive continuous care, such as ostomy care or diabetic care.

> **Key Finding:** Patient feedback should be limited to recovered patients in the community. In some circumstances, in-hospital patient feedback may be required, but this should be reserved for special cases in which gathering community feedback is either not possible or productive.

▶ **Selecting a Ward:**

o **Less acute settings:** Three participants suggested that acute care wards, such as oncology and the emergency department (ED), are not ideally suited for PROMs implementation for the following reasons:

- **Patients are often critically ill in acute settings** and are thus less capable of participating in procurement activities, such as interviews.

- Less acute wards have **longer-term patient interaction which facilitates collection of PROMs.** For this reason participants suggested the following wards would be well-suited to PROMs:

    - Nephrology: *"you usually **get the same patients coming in and out**."* (Participant 1)

    - Surgical (i.e. orthopaedic) and medical units: *"they're [patients] still there long enough that you can get a fair and accurate evaluation." (Participant 2).*

    - *"… oncology patients, hemodialysis patients, long-term care patients… anyone who's going to have, like, a longer exposure than one stint to health care, then*

those are the types of patients that we would think about getting involved."
(Participant 7)

In contrast, it was suggested that obstetrics and gynecology may not be an efficient area to incorporate PROMs or trial products for patient input because these patients are typically young and healthy and as a result, there is high patient turnover and subsequently, low levels of exposure to any given product.

o **Significance of the procedure:** One participant suggested that large, defining services, such as orthopaedic and cardiac surgery, are potential areas where PROMs could be useful and initially implemented because these are major critical surgeries and thus, have **high significance to patients**. For example, if a patient has a bad hip replacement, their mobility will be impaired and their quality of life will likely decrease.

o **Staffing:** One participant suggested that staffing in a given clinical area is also an important consideration to the involvement of patients in procurement processes, both in terms of staff **proximity to patients and skills**. Clinical areas with a low patient-to-staff ratio (ideally one-to-one) facilitate the collection of PROMs, as one participant indicated *"sometimes patients will say, ... 'I've been thinking about it for two days, here's my thoughts'" (Participant 2)* and noted that to hear this input, there must be a staff member available to follow-up with the patient. Further, clinical areas with a **defined set of skilled staff**, including nurses and recreational therapists, that are able to quickly understand how a product is performing are also helpful when incorporating PROMs initiatives.

o **Patient volume:**

  • Low volume: Wards with lower patient volumes are recommended as sites for implementation of PROMs that will **require clinician assistance/input**, as these sites have a lower patient-to-staff ratio. The high volume of the ED is another reason why it is not recommended as a site to involve patients in the procurement process.

  • High volume: For PROMs initiatives that are less reliant on clinicians and require **maximal patient input**, one participant suggested that cardiology and electrophysiology units would be well-suited, given the high volumes of patients in these units.

> **Key Finding:** Based on the suggestions above, participants identified multiple clinical areas that would be well-suited to incorporation of PROMs, as well as those that would not; however, ultimately, multiple participants noted that implementation of PROMs in any clinical area would depend on the patient and family, as well as the product.

Survey Results: The **clinical areas** most often incorporating patient feedback for purchasing activities were:

Clinical Area	Percentage of Respondents whose Organizations Incorporate Patient Feedback
Orthopaedics	47.06%
Oncology	38.24%
Cardiology	35.29%

General and thoracic surgery	35.29%
Urology	35.29%
Endocrinology	23.53%
Rheumatology	14.71%

These survey results indicate that orthopaedics is currently the clinical area in which patient feedback is most incorporated, while rheumatology is the clinical area in which feedback is least incorporated.

3.2 Selecting Early Adopter Products for PROMs Engagement

Based on interview findings, it was revealed that patient involvement in a procurement process is dependent on the product that is being procured, as some are better suited towards PROMs than others. As such, organizations should consider the factors below when choosing products to pilot implementation of PROMs.

▶ **Consistent Product Exposure:** Three participants suggested that to incorporate PROMs in procurement processes, the patients must have an **adequate and consistent level of exposure** to a given product. In particular, one participant suggested that any clinical areas in which patients have a chronic condition would be well-suited to PROMs. On this note, another participant stated,

"I don't really see us ever to the day where we would say we're going to buy a Band-Aid and then we'll have patients evaluate it because they really, the way that the nature of health care is now, they're not even in hospital long enough for us to even get any information back from them." (Participant 7)

▶ **Relevance to Patient:**

　　o Irrelevant:

　　　　▪ **Equipment that most impacts specialists:** Patients should perhaps not be directly involved in such procurements, as this equipment is used by specialists and thus, require that specialists make a decision regarding which product is anticipated to provide the best quality of care.

　　　　▪ **Insignificant products:** As patients would not likely know the difference between various needles, for example, PROMs would not be well-suited towards procurement of such products.

　　o Relevant: Participants suggested that patients should be involved in procurement processes for **products that affect their daily life/quality of life,** such as products that the patient uses in the home. For example, patients or family members would be an important voice for validation of incontinence products, dialysis equipment, pacemakers and insulin pumps.

▶ **"Interest" Factor:** Another factor to consider when engaging patients in procurement is their level of interest, as it will be easier to obtain patient engagement for procurement of more interesting products, such as those used in interventional cardiology, for example. In contrast, patients are less likely to be interested in products such as bandages, diapers or sutures, and thus, will be more difficult to engage for initiatives related to these products.

▶ **Proximity to Patient:** One participant suggested that incorporation of PROMs in procurement would be well-suited for IV tubing and catheter products, as it is relatively easy for patients to assess these products. Similarly, another participant noted that cardiology and electrophysiology programs do minimally invasive procedures to implant stents and pacemakers during which patients are awake and able to focus on the product; thus, pacemakers or stents would be well-suited to patient input.

> **Key Finding:** Patients should not be expected to have a full understanding of all products and thus, should be involved with product evaluations on an ad hoc basis for those that are **specific to their (or their families') needs and personal experiences**. By doing so, their input will be more effective.

3.3 Setting PROMs Criteria

When selecting PROMs criteria for consideration during a procurement initiative, it is important to consider the **number of criteria, metrics and weighting**. These concepts will be further discussed below.

Choose a "critical few"

As financial criteria consists of only one criterion (i.e. price), participants discussed the importance of choosing a critical few clinical criteria to ensure these criteria are each weighted highly to avoid price becoming the determining factor for a procurement. One participant provided the example that if there were 100 clinical criteria to evaluate against 70 non-financial points, each criterion would account for 0.7 on average, which is so diluted that it is practically meaningless and as such, price becomes the number one criterion, since it is only a single number. Given the vast array of potential clinical criteria, staff engaged in a procurement must be very disciplined to identify a critical few for inclusion.

In particular, one SSO has done work to **focus on a critical four to five clinical criteria**, which one participant noted as an optimal number. This participant noted that despite isolated efforts, more needs to be done to drive professionals to identifying those critical few. To facilitate this, this participant suggested that organizations could use **bundled criteria or subsets**.

> **Key Finding:** Identify a critical few (i.e. four or five) PROMs criteria to focus on during product selection. If many criteria have been identified, bundle these criteria into subsets.

Metrics

Based on participant interviews, the following tips to identify and select PROMs metrics have been suggested:

Core criteria: Multiple participants discussed the criteria that would be most important to consider regardless of product line or patient type, which include items related to:

- **Comfort** (i.e. is the patient comfortable when using the product?)
- **Quality of life**
  - Of the importance of this measure, one participant noted that many current measures of patient outcomes consider adverse outcomes; however, most patients do not go into a procedure only hoping to meet certain clinical criteria. Instead, *"most patients want to go into a procedure hoping to have an improvement in their quality of life coming out." (Participant 7)*
- **Activities of daily living** (i.e. is the patient able to continue with their regular activities?)
- **Quality of care:** appropriateness and acceptability (i.e. is the product what the patient wants?)

Variable criteria: Beyond these aforementioned core criteria, three participants suggested that most PROMs **criteria should be tailored to the product and patients** and thus, there would be a high degree of variability. To illustrate this, these participants gave the following examples of criterion that would be used for briefs:
- Usage: Can the new brief can be used longer than the current product?
- Sleep: Did the patient sleep well using the new product?
- Comfort and feel: Was there any itchiness?

▶ Outcomes: Does the product contain urine adequately? Did the patient bed have to be changed when using the new product?

Depending on the product, participants identified other quantifiable outcomes that may be relevant to patients:

▶ Did the patient go home earlier?
▶ How did the patient feel upon return to home?
▶ What was the patient's overall pain level?
▶ Has the patient had fewer returns to the operating room?
▶ Did the patient have fewer adverse outcomes?
▶ How does the patient feel?
▶ How does the product feel for the patient? (i.e. Does it hurt?)

Final Prompts: Once various metrics relevant to the particular product have been identified, one participant suggested **that procurement personnel consider the following prompts prior to selection:**

▶ What does an outcome really mean?
▶ What does this outcome look like?
▶ Are these marginal implications or the critical few criteria?

Weighting Criteria

In terms of weighting of PROMs within an RFP, one participant suggested that 5% weighting for PROMs is suitable, as it was their opinion that PROMs should be a factor, but not necessarily the decision-making factor. In contrast, another participant indicated that weighting of patient-focused criteria should depend on the product, stating that *"if it's a home-based service or good that the patient is actually the end user of, then it's [PROMs weighting] obviously going to be a much higher percentage than the technical and the financial [weighting]…I would say 30%." (Participant 12).*

> **Key Finding:** Weighting of PROMs should take the significance of the product to a patient into consideration; however, must also be balanced with other criteria, such as financial considerations. Weighting of PROMs criteria varied significantly across interview and survey participants.

3.4 When to Engage Patients

Multiple participants stated that organizations should engage with and involve patients in different parts of the RFP process and that patient input during certain stages is dependent upon what would be most beneficial for a particular procurement.

RFP Development

Multiple participants discussed the importance of co-creation and -development processes with patients during the early stages of a procurement. With regards to this, it was suggested that patients should help develop questions and identify what outcomes are most important to them. As such, it was recommended that patients should be included at the beginning stages of an RFP during which questions, requirements and specifications are developed. In order to facilitate this process, it is recommended that health care and/or procurement organizations participate in an outcome-based discussion with patients to understand their priorities.

Evaluation/Validation

Multiple participants suggested that patients should be involved in final evaluation and validation stages of an RFP. One participant suggested that to do so, patients should become familiar with and test the equipment/product.

> **Key Finding:** Two key stages for patient involvement in procurement processes are during the RFP development and the evaluation/validation of an RFP.

3.5 Education for Participation in PROMs Activities

Several participants emphasized the need for further education for procurement experts, clinical experts, patients and community members, with one participant summarizing that *"[education is] tremendously important and part of it comes from ensuring that not only the individuals whose job is procurement, but also the other individuals who may be involved in that decision-making" (Participant 1)* are being educated regarding procurement activities.

> **Key Finding:** Education should be provided to all stakeholders engaged in and directly impacted by incorporation of PROMs in procurement. Stakeholders should be provided high-level education about hospital purchasing, vendor relationships and, most importantly, the purpose and process of product selection. Education should place an emphasis on delivering patient value over reducing costs.

Educating patients and community members

Multiple participants discussed the importance of educating patients and community members, more broadly, about procurement initiatives, especially those that want to learn about the types of products that are available. It was suggested that **patients should be educated both in terms of products, as well as the broader procurement system**. Patient education is also important to provide insights as to how procurement decisions are made within health care.

Speaking specifically about broader community engagement, one participant suggested that organizations currently do not do a good enough job of educating community members despite the fact that health system decisions influence communities, especially those that are smaller in size.

In regards to patient education, two participants suggested that all patients involved in PROMs should be given educational materials to provide an overview of the procurement process and ensure a level of understanding of the products themselves. In doing so, patients become more aware of the procurement process and their role in it and as such, their participation is more meaningful and productive.

Multiple types of educational initiatives directed towards patients were proposed by participants:

▸ **Events:** Currently, health care professionals are invited to attend vendor days to learn about each vendor's products prior to a contract being awarded or an RFP being released. Participants suggested that patients should also be able to attend and experience vendor days so they could have an opportunity to see, touch and ask questions about various products. Operationalizing this should be fairly straightforward, given that vendor days already occur on a regular basis. Another participant cautioned that organizations need to be cognizant of the fact that **event forum attendees will likely not adequately represent the entire community** and as such, organizations should develop a process that ensure that all patients and/or community members are informed, where possible.

▸ **Literature:** Vendors need to consider patients when providing literature, which is currently written for physicians and procurement specialist audiences. For instance, one participant gave the

example that if a procurement specialist were to have a surgery, they would know exactly what hips to request, what type of steel, what vendor, etc. and suggested that for these same reasons, this literature should also be released to the general public.

One of the current limitations of literature is that it is written for a clinical or procurement audience and thus, uses scientific terms. To make it accessible, literature should instead be simplified in a manner that is useable to patient consumers. To do so, there needs to be a partnership between the hospital and vendor to create and disseminate literature for patients.

▶ **Exposure:** One participant suggested that patients' actual involvement in tendering and selection processes would allow them to learn about procurement in a concrete manner. Repeated exposure to these processes will enhance patients' understanding of procurement activities.

> **Key Finding:** Patients who self-identify as being interested in procurement education initiatives are likely to already have an enhanced understanding of health systems, and as such, are not to be relied on as the sole voice for patient feedback. Regular patient participants can help to provide patient-important input to procurement discussions, but other mechanisms must also be in place to ensure accurate representation from the entire patient community.

Educating health care and procurement professionals

In addition to educating patients and members of the community regarding procurement processes and products, participants noted that to successfully incorporate PROMs, it is also important to build the competency and skills of health care and procurement staff regarding **products and processes,** especially since PROMs initiatives will require a change in the way a procurement activities are conducted. It is anticipated that these professionals would benefit from additional training in VBP and analytical evaluation of contract management, as one participant stated,

> *"There's also a lot of very technical skills from contract management and negotiation - skills that aren't normally part of the procurement officer's skillset. How do you calculate value and how do you understand and capture the savings that will come from this value-based purchase?" (Participant 1)*

In addition to education aimed to build skills, one participant noted that education provided to hospital employees and clinical staff as part of the greater VBP agenda is also contributing to greater openness to patient engagement.

With specific reference to educating **new and future procurement professionals**, one participant stated, *"It's much more about educating, of providing the skills to the resource base and the up and coming new resources that are coming to this career for the future." (Participant 12).*

One participant suggested that organizations may want to keep records of staff attendance at education sessions to ensure they are staying informed.

> **Key Finding:** As incorporation of PROMs will require a change in practices, health care and procurement professionals should be provided with education sessions to ensure all personnel are aware of and understand the implications of and best practices related to such initiatives.

3.6 Capturing Patient-Important Data

As true incorporation of PROMs requires that decisions be made based on outcomes and real-world evidence, accurate and reliable data is fundamental to implementation. As such, a participant from a

business network in Ontario noted that **purchasing or creating a sophisticated data collection and analysis system** is foundational to incorporating PROMs into procurement practices.

A practical example of the importance of data-informed decision-making in procurement comes from the private sector, as one participant noted that based on the results of their own clinical trials and research, as well as experience in other jurisdictions, suppliers know how their product produce certain outcomes, *"but there's no Ontario-specific way of demonstrating that [outcomes] and there's also no way then of creating these sort of creative contracts where you can say 'look, my product is more expensive than my competitor's products, but it's going to save you more money in the long-term and it's going to deliver these results and if we don't deliver on those results then you can penalize us.'"* (Participant 1).

Although this type of contracting is a great idea in theory, organizations currently do not have the ability to measure results and thus, this type of contracting cannot be done. Of this, one participant stated that,

> *"Analytics, generally, can really open up the playing field for doing the kind of value-based procurement kind of commissioning that would make a huge difference in our health care system and you know, obviously the other side of that too is better understanding and planning… but it all comes back to the same story of data."* (Participant 1).

Key considerations related to capturing patient-important data are:

- ▶ **Resources:** In terms of resources, one participant noted the importance of appropriate resource dedication to data collection, saying that *"it [data collection] will never work off the side of someone's desk." (Participant 7)*. Rather, there must be dedicated personnel for data collection that will have time to follow-up with patients and help them fill out a survey in their care setting, for example. Ultimately, data collection needs to be treated as a priority in order to ensure quality information can be gathered.

- ▶ **Consistency:** One participant noted the importance of consistent data standards amongst organizations. For instance, all data collection personnel should operate using the same definitions and understanding.

- ▶ **Timing:** To generate meaningful data regarding patient outcomes, multiple participants noted that **measurement at appropriate times** during the patient's care journey is essential. One participant noted that it would be valuable to measure certain patient outcomes, such as quality of life, both before and after the intervention.

  Post-intervention data collection should occur at multiple time points, which can be varied depending on the intervention/product, patient and outcomes of interest. For example, one participant noted that in other jurisdictions, patient outcome data is collected in a doctor's office via survey every time the patient visits over the post-operative period, such as six weeks, three months and six months post-operation. The rationale for this is that patients in the middle of their recovery are likely to have different responses than they will multiple years post-recovery. Similarly, there are often expectations of 'ups and downs' following a clinical intervention, which is an important consideration when measuring outcomes. As such, **time to full recovery** should also be considered when determining the post-intervention data collection period. Multiple participants noted that evidence suggests that patients will experience their most optimal outcomes **six months to one year post-intervention** and as such, it is best to consider the intervention "complete" at the six-month to one year period. To make an informed decision, the literature should be reviewed to establish the most appropriate data collection period.

- ▶ **Methods:** Participants noted that various methods can be used for data collection and that organizations must choose which to use depending on the purpose. Key methods to obtain patient outcome data are:
  - ○ Focus Groups: Three participants suggested focus groups as a method to collect PROMs, as this is a valuable method to connect with patients, explain what is being asked of them and facilitate a process in which they are able to express their thoughts and opinions. One participant noted that composition of the focus group is an important consideration, as the right balance of perspectives should be represented. One participant thought that focus

groups would not be appropriate for every product. Products that would work in a focus group setting are orthopedics, such as hips or knees, and cardiac products, such as valves.

- o In-Depth Interviews: One participant suggested that interviews to capture patient experiences and undergo exercises such as patient journey mapping would be helpful to understand patient outcomes and experiences more deeply.
- o Electronic Questionnaire: A setting appropriate for this method would be in a physician's office, clinic or hospital waiting room, for example.
- o Telephone Survey, which could be done by a third-party organization

One participant suggested that administering PROMs-related questionnaires via mail is not recommended, as patients tend to receive these surveys weeks or months following a procedure or intervention, which makes it more difficult to catch their attention, especially if they are doing well.

▸ **Clinical Significance:** A participant from a health council in British Columbia stated that *"things that are statistically significant aren't clinically significant. Like, that's great that you have a 0.25 day reduction in length of stay, but, the patient is here for four hours." (Participant 7).* This participant made the point that what matters to patients may not be statistically significant and instead, **clinical significance should be the emphasis** when analyzing patient outcome data.

▸ **Tools:** One participant suggested that validation forms that are specific to each type of stakeholder, including clinicians, patients and their family, would be a technique to enable their input in procurement processes.

▸ **Accessibility:** Two participants suggested the importance of accessibility and ease of engagement, especially for patients may be in vulnerable positions and/or not necessarily mobile. As such, patients should be offered both **mobile and remote options for participation**, such as Skype and FaceTime.

▸ **Formal structures:** One way to structure patient engagement is through the formation of patient committees in which patients can be formally involved in consultation processes. On this note, one participant suggested that since the Ministry of Health and Long-Term Care is currently working towards various provincial collaborations, consideration of a provincial patient committee that is specific to procurement may be warranted. Similarly, one participant suggested that for larger scale initiatives, councils or similar forums could be created. This was the approach used for an innovative procurement of digital hearing aids in Sweden.

▸ **Setting:** One participant suggested that patients should complete a product evaluation in the setting (i.e. including their home) in which they are using the given product, especially if they have to use the equipment on their own.

Key Finding: Collection and understanding of patient data is critical and as such, it is necessary to enable organizations to access and utilize this data. Consideration of the following key factors will contribute to the collection of patient-important data:

- o Proper resources
- o Consistent standards
- o Measurement at appropriate time intervals and settings
- o Use of relevant, accessible methods and tools
- o Prioritization of clinical significance
- o Engagement through formal structures at various levels

3.7 Advanced Data Analytics

A key opportunity highlighted by participants was the potential for **advanced data analytics to facilitate patient engagement**, as one participant summarized,

> *"I would argue that the foundation to all of this [incorporation of PROMs] is getting or creating a sophisticated data collection and analysis system - especially if you want to make decisions based on outcomes and the kind of real-world evidence that the government will actually accept… You have to have the system in place to accurately collect the data, analyze the data and then actually put that data to use…* ***Analytics can really open up the playing field for doing the kind of VBP commissioning that would make a huge difference in our health care system.*** *" (Participant 1).*

In particular, advanced data analytics would allow for:

   a) tracking of patients (and their outcomes) over an extended period of time

   b) automation of patient feedback, which would reduce the administrative burden for clinical staff to communicate product feedback from patients to purchasing departments;

   c) facilitated knowledge transfer between hospitals, GPOs and SSOs to pool patient feedback; and

   d) facilitation of creative vendor contracts and commissioning.

Strategies to advance data analytics and thus, achieve these opportunities are further highlighted below.

Collect long-term outcomes

A participant from Nova Scotia believes that the province is not doing a good job incorporating long-term patient outcomes into procurement decisions. For example, one year post-intervention, some patients may experience better success with certain products, but there is currently no way to feed that back in to the procurement process. Of this challenge, one participant stated,

> *"In that 20 years [that a product has been used] how many times has a patient had an adverse effect by using this product? We don't know that because the patient has never been at the forefront to say 'hey, what product did you use on me?' … I've had this problem since day one.' There isn't that interaction - the patient walks away. There's maybe a year of follow up, but then we don't know how it reacts 3 years, 5 years from now." (Participant 5)*

Given their importance, organizations should **facilitate and prioritize the collection of long-term outcome data.**

Improve integration of existing systems

Clinical and administrative systems

Integration of clinical [i.e. electronic medical record (EMR)] and administrative [i.e. enterprise resource planning (ERP)] data is an important opportunity for health care organizations, with one participant noting,

> *"There's lots of different clinical systems, administrative systems that perhaps each independently might have those [data] capabilities, but those capabilities generally only can become enabled by integrating systems and sharing information." (Participant 6)*

Purchasing departments can be a champion for data integration within hospitals. By working with information technology departments and vendors, purchasers can make the case to organizational leadership that integrating EMRs and ERP systems would enable capturing patient feedback, creative contracting and more accurate patient outcome data. SSOs and GPOs are well-positioned for this given their pre-existing relationships with multiple organizations and clinical departments.

Cross-organizational integration

Participants noted that data integration across institutions and organizations could be highly valuable, stating that,

> *"There's all kind of value to be had in using more than one site to collect your real world evidence or conduct your trials and that sort of thing would be much easier if the Ministry was at the table and enthusiastic and*

saying 'demonstrate how this is going to provide us value and … we'll help you coordinate that so you're not going to individual LHINs or individual hospitals to do that.'" (Participant 3)

"A data collection system that would link all relevant hospitals and health centers and allow procurement to be streamlined and [standardized] across the province - that would be something that would be very beneficial but would require a Ministry to be at the table." (Participant 1)

To realize this type of integration, Ministry-level support would be effective.

Leverage private sector capabilities

Enhancing the sophistication of data collection and analysis could be done in partnership with private sector vendors, as such organizations likely already have the analytical capacity.
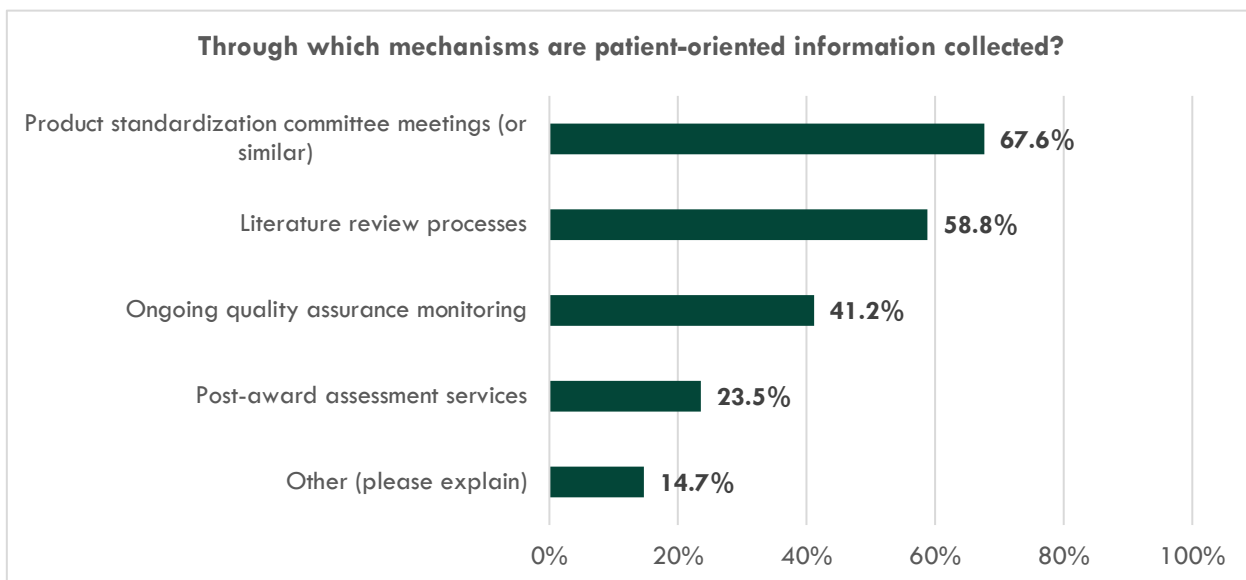
> **Key Finding:** Facilitating and promoting the use of advanced data analytics is an important strategy to successfully incorporate PROMs into procurement decision-making. To do so, 1) longer-term data should be collected, 2) opportunities for data system integration should be pursued and 3) private sector partnerships should be leveraged.

3.8 Standardize Incorporation of PROMs in Decision-Making Process

One participant discussed that although health care and procurement organizations have been interested in innovative procurement approaches and VBP for a number of years, these initiatives are currently implemented inconsistently. In most cases, such initiatives require a request for additional funding and have only been considered for large capital procurements. Speaking to the need for standardization, one participant stated, *"we should be able to mechanize that [PROMs] - **bring it right down to our standard processes.** We should always be looking – 'Is this a traditional specification type RFP? Is this an outcomes-based type solution? Should we be looking at patient outcomes? What are the quality outcomes? What's the performance and the service levels that we're looking for?' … **This shouldn't just be about special projects. This should be part of your toolkit.**" (Participant 12).*

3.9 Sources of PROMs Information

Survey Results: Participants were asked to identify the **mechanisms** their organizations use to retrieve patient-oriented measures for the purposes of procurement and the following responses were collected:

Through which mechanisms are patient-oriented information collected?

Mechanism	Percentage
Product standardization committee meetings (or similar)	67.6%
Literature review processes	58.8%
Ongoing quality assurance monitoring	41.2%
Post-award assessment services	23.5%
Other (please explain)	14.7%

These findings indicate that most (67.6%) organizations utilize product standardization committee (or similar) meetings, followed by literature review results (58.8 % of organizations), to collect patient-oriented information. "Other" responses included clinician participation on evaluation teams.

3.10 Facilitate Open Dialogue Between Vendors and Purchasers

According to one participant, purchasers often approach suppliers with very detailed specifications based on information from the manufacturers website, but those exact specifications may not be exactly what the purchaser needs or wants. To address this, this participant suggested that **purchasers need to be willing to have open discussions with suppliers throughout the procurement process**. The *BPS Primer on Innovation Procurement (Interim)* report specifically addresses this idea, as it emphasizes the use of early market engagement strategies as a "key step in a well-planned procurement process that allows suppliers to learn about the needs that procuring organizations are planning to address." These strategies can then lead to more formal procurement processes.

This openness would be helpful for suppliers to further discuss and understand desired outcomes and potential solutions. To facilitate these types of conversations, one participant suggested that purchasers should reframe their approach to facilitate a focused outcomes-based dialogue. This re-framing could be in the context of conversations that allow for low-pressure and low-stake opportunities to ask questions, give initial presentations and have open conversations about potential solutions outside of the RFP scope. In this process, this participant suggested that it would also be helpful if suppliers had the ability to submit a bid that does not quite fit the criteria without immediate penalization and/or submission removal.

One method of procurement that is focused on open dialogue is a **competitive dialogue process in which a shortlist of suppliers are invited to participate in the dialogue process** (*BPS Primer on Innovation Procurement (Interim), n.d.*) A participant with experience using this process explained that outcomes-based criteria are determined before the competitive document is issued and as a result, invited suppliers are approached with a concept backed by value-based outcomes centered around patients, community and quality measures. These outcomes guide the competitive dialogue process and based on initial

conversations, requirements are then built with suppliers. A dialogue occurs to build the solution to the point where a supplier, consortia or partnership submit a final solution that all parties agree to and only after this point are financial elements introduced. The result of this process is that outcomes-based and service performance indicators have been developed and agreed upon. The next step is to manage the contract and partnership, including its outcomes, for six to seven years during which performance measures are built jointly. Through this process, there is a commitment made amongst partners and to patients.

> **Key Finding:** Purchasers need to be willing to have open discussions with suppliers throughout the procurement process. To facilitate these types of conversations, purchasers should reframe their approach to facilitate a focused outcomes-based dialogue. One method of procurement that is focused on open dialogue is a competitive dialogue process using outcomes-based criteria.

3.11 Explicit Policy Focus on Value

Through the BPS Directive, Ontario should champion its focus on VBP and ensure it is well-incorporated throughout hospitals within its jurisdiction. Although the BPS Directive does include value for money as a foundational principle, it could more explicitly emphasize its focus on value by stating that contracts should be awarded to the 'most economically advantageous tender,' as indicated within the EU procurement Directive. Further, one participant suggested that procurement legislation could facilitate VBP processes by incorporating the **total cost of ownership and considering broader impact on society**.

As such, this participant suggested that legislation specifying the requirement for organizations to implement VBP processes is required to ensure uptake and should also advise organizations as to how to operationalize this approach.

4. Change Management Strategies to Incorporate PROMs

Chapter at a Glance

▸ Participants offered many recommendations for change management strategies, beginning with techniques to help build a culture of patient engagement and VBP.

▸ Recent policy efforts focused on VBP have been effective at shifting organizational culture and procurement strategy towards total cost of care over a product's lifecycle. VBP should continue to become operationalized in hospitals by integrating long-term metrics into performance incentives at all levels.

▸ For organizations that have not yet ventured into the world of PROMs, it is recommended that a phased implementation approach be adopted, beginning with incorporation of patient feedback for large, high-impact products in clinical units that already have experience with and a culture of patient engagement.

▸ Participants ranked the enablers to incorporating patient-oriented measures into procurement processes in descending order: clinician support, organizational support, patient engagement, standardization of processes and tools, jurisdictional support and technology capabilities.

▸ A large set of stakeholders should be engaged to advance the incorporation of patients within procurement processes. These stakeholders include industry, government, community care, SSO and academic representatives – each with their own unique role in health care and/or purchasing systems.

▸ Based on the successes of other jurisdictions, such as European countries, it was suggested that PROMs initiatives would be best implemented through a top-down approach that is driven by support from leadership.

▸ Successful implementation of PROMs requires more broad and deep partnerships between all levels of care, including amongst community, long-term care, continuous care and acute care organizations, as well as patients from each of these levels.

▸ Identification of a "leading organization" – an organization or group of organizations that will be most responsible for the incorporation and standardization of PROMs initiatives – is suggested to ensure accountability, leadership and direction to guide such initiatives.

▸ Participants had several recommendations to support incorporation of PROMs through effective communication, including to 1. emphasize quality rather than efficiency; 2. engage senior leadership; 3. leverage patient-centered care philosophy; 4. employ phased use of open forum and direct engagement; and 5. engage in consistent connection with patients.

▸ Patient engagement activities should be operationalized so that they become common practice and do not require an active patient engagement agenda to maintain.

As incorporation of PROMs in procurement processes will require changes – both small and large - to current practice, change management is a critical component of successful implementation. Of this, one participant noted that "*there's going to be an increasing amount of focus on patient-centeredness and these are not problems you can't overcome. It's a change management exercise.*" *(Participant 9)*.

The importance of change management strategies, namely support from key stakeholders, is evident in the survey results below.

Survey Results: Participants were asked to rank the **enablers** to incorporating patient-oriented measures into procurement processes in order of importance.

Enablers of Incorporating Patient-Oriented Measures into Procurement Processes	Average Ranking of Enablers (1=most enabling, 10=least enabling)
Clinician support	2.5
Organizational (i.e. administrative, managerial, etc.) support	3.1
Patient engagement	3.5
Standardization of processes and tools	3.5
Jurisdictional (i.e. regional, provincial, etc.) support	4.0
Technology-/data-related capabilities	4.6

These findings indicate that the most enabling factors, in order of importance, are clinician support, organizational support and patient engagement – each of which can be facilitated by effective change management strategies.

These change management strategies, in addition to others, are elaborated upon below.

4.1 Developing a Culture of Value-Based Procurement

One of the greatest facilitators of the adoption of patient feedback in procurement is the shift from cost-based procurement decision-making to value-based decision-making. Although not yet standard practice, procurement decisions are now being made with long-term outcomes in mind and the value of a product now includes the total cost of care over the product and/or patient life. This philosophical shift has opened up new possibilities of contract development and management which enable the capture and consideration of patient feedback. Of this shift, one participant noted,

> "*There is plenty of work being done by health care research organizations and think tanks, as well as some of the major global consulting firms, on things like commissioning, on things like outcomes-based decision-making, value-based procurement – and so that has also been a mover. **Often, the answer that comes back is trying to re-think their approach to value or at least move them away from a solely cost-based decision-making structure.**" (Participant 1)*

> "*KPIs are a really good barometer for people's success, but if you tell me my KPI is only to save $30,000, that's what I'm going to focus on. But **if the KPI is to be able to save money while ensuring that the patients are getting quality patient care, that's a different KPI and that's a different motivation for people**." (Participant 11)*

> **Key Finding:** Recent policy efforts focused on VBP have been effective at shifting organizational culture and procurement strategy towards total cost of care over a product's lifecycle. VBP should continue to become operationalized in hospitals by integrating long-term metrics into performance incentives at all levels.

4.2 Developing a Culture of Patient Engagement

One participant suggested that to make a procurement decision, all stakeholders, including patients, should at the very least be meaningfully engaged to inform the decision.

Clinical Departments with Focus on Patient Engagement

Participants spoke of many specific departments that already place a greater emphasis on patient engagement and satisfaction. These departments typically have the following characteristics:

▶ **Longer length of stay (LOS),** which allows staff to develop relationships with patients

▶ **Care for children,** who typically have strong health advocates accompanying them. For example, one participant stated that *"I worked at a pediatric institution here in Toronto and it's world renowned, and they are very much engaged in bringing the parents in and the patient in to the decision-making process … This process hasn't inched in to an adult population hospital as of yet."* (Participant 5).

Participants felt that these departments are best positioned to lead the patient engagement processes across hospitals in Canada, as **they already have staff that understand and buy into the engagement philosophy** and thus, have the potential for the greatest impact with their patients.

In terms of implementation approach, participants suggested that, at least in the early stages of patient engagement activities, organizations should limit their procurement patient feedback to departments with higher LOS, as one participant noted,

> *"**People who deal with a patient for a longer period of time, they're more in tune to it because they have a different relationship with the patient** than someone who works on say a surgical floor or works in an OR, PACU - I mean, their patient contact with them is fleeting at best for some of them. If you've got an OR nurse, basically they see them for a few minutes before they go into the procedure, but then they never have any conversation with them again."* (Participant 11)

> **Key Finding:** For organizations that have not yet ventured into the world of PROMs, it is recommended that a phased implementation approach be adopted. Organizations should begin incorporating patient feedback for large, high-impact products in clinical units that already have experience with and a culture of patient engagement.

Leverage Integration of Clinicians in Procurement

Another key facilitator of patient engagement is the existing integration of clinicians in procurement, which has increased over the last five to 10 years with the advent of VBP. As a result, most procurement departments now work with clinicians to develop and evaluate the clinical components of contracts, while procurement experts focus on contract management and cost components. Of this trend, one participant stated, *"**you're seeing more clinical people be involved in the purchasing departments themselves over the years**. And not to say that all SSOs have them, but if you go to almost any SSO or GPO now you'll see a clinical component there, which is bridging that gap between the clinical staff and the business side of the RFP."* (Participant 11).

This integration of clinical and procurement activities has set the stage for patient feedback as:

▶ The logistics for engaging clinicians and patients have some similar elements;

▶ Procurement departments are experienced at dividing clinical and contract components into separate criteria; and

▶ The organization as a whole understands the impact of and supports VBP.

It was previously identified that physician engagement in procurement processes can be a challenge due to various factors, including schedule limitations and that participation is not a requirement of the their role. As such, one participant suggested that *"we might need to look at adjusting the roles and responsibilities [of physicians]." (Participant 3)*

> **Key Finding:** Find ways to incentivize physicians for participation in purchasing activities. These could include direct financial incentives or contribution towards academic/research/administrative output. While the ideal purchasing scenario would include representation from all stakeholder groups, it is often not possible due to competing schedules. In these cases, purchasing department should consider collecting clinician and patient feedback separately.

Highlight Success Stories and Capitalize on Momentum

As more successful **case studies** of patient involvement in procurement processes are made public, the confidence in pursuing new patient engagement strategies increases. Barriers once thought insurmountable can be overcome by **learning from, adopting and scaling strategies that were successful in other jurisdictions**.

Participants also commented that the **increasing emphasis** on patient-centeredness is helping to align the various stakeholders involved in health care procurement onto one common mission.

> **Key Finding:** Leverage successful case studies as a driver for adoption of PROMs into procurement processes. Demonstrating alignment between patient feedback/experience and clinical outcomes/cost is an effective way of creating a culture of patient engagement.

Ensure Meaningful Engagement

Two participants noted the need to ensure that not only are patients invited to the table figuratively, but that their input is meaningfully solicited and they are engaged in a way that is **intentional**. One participant stated that *"if you're going to involve the patient, then involve the patient. You don't have to incorporate every piece of feedback they give you - patient, partner, or otherwise - but you have to acknowledge it." (Participant 7).*

Build Effective Relationships

A trusting relationship based on transparency and effective communication must be established with patients, with one participant stating,

> *"There is a lot of skepticism around where the research is going so getting people to feel safe to provide that information was a challenge. **Working with those patient populations and having them feel like it's a safe opportunity to provide feedback was a big piece**. So, that often came back to that relationship development and ensuring that there was some sort of a connection back to the individuals that were using that information." (Participant 6)*

> **Key Finding:** All outreach materials disseminated to patients regarding their voluntary participation in purchasing activities should include clear identification of what information will be collected and how it will be used. Any potential risks to patients must be identified.

Establish Clear Rules of Engagement

Regarding hospitals' hesitancy to provide patients and community members with financial information, one participant suggested that,

"We almost have to have a set of rules to say consumers or patients who come in, 'these are the questions you can ask and these are the taboo questions you can't ask' … Something that the patients should be signing or, you know, 'these are the ground rules of you participating in this exercise or being part of this.'" (Participant 5)

Key Finding: Organizations should clearly define what types of information patients will have access to in purchasing activities, as well as what types of information will be kept private (i.e. internal to the organization). The level of transparency will depend on organizational culture, community relationship and acceptable risk.

4.3 Engage Diverse Stakeholders

Several participants commented that engaging patients for procurement activities does not need to be the sole responsibility of one organization, but rather should include a **larger set of stakeholders** (as described below) each contributing to and encouraging patient engagement.

▶ **Industry/vendors:** Industry is a required party for patient feedback mechanisms as they need to be supportive of a feedback process built into any submitted proposal. Without strong vendor relationships, the likelihood of successfully integrating patient feedback into an RFP is diminished. Further, industry's sophisticated data collection and analysis systems and direct connection to product development and improvement should be leveraged.

One participant noted that pharmaceutical and medical device companies, as well as consulting firms, are interested in changing the relationship between the buyer and the vendor to facilitate the implementation of innovative procurement practices, including PROMs, within the hospital setting. One participant noted that suppliers, such as Medtronic and Philips Health Care, are critical to ensuring successful implementation of PROMs, given their growing expertise and leadership in the area of VBP on an international scale. For example, Philips Health Care was successful in an innovative imaging services RFP in Sweden (see Literature Review). In addition, participants noted that most vendors would like access to patients to be able to measure their outcomes and demonstrate the effectiveness of their products.

To leverage suppliers' expertise and capabilities, one participant suggested that partnerships need to be created with these organizations, especially those that are large.

▶ **Government:** One participant noted that procurement regulations can be challenging to create or modify, so PROMs leaders should ensure that content experts, such as policy makers and government administrators, are involved. Further, other jurisdictions, such as European countries, have had successful PROMs initiatives driven by executive support from the Ministers of Health.

Specifically in Ontario, government can work to ensure that procurement departments and organizations have an accurate understanding of the BPS Directive so that it is not mistaken as a barrier to innovative procurement practices. One participant described this potential role by stating,

> *"The Ministry can make it very clear what the BPS directive allows and does not allow because **right now, there's a lot of misunderstanding about that and a lot of concern and conservatism amongst buyers that they don't want to do anything that could possibly cross BPS and so they're not going to even try**. They're not going to read closely and see what's not explicitly not permitted." (Participant 1)*

▶ **Community Care:** One participant noted that since Community Care Access Centres are now folded into the LHIN and more long-term care facilitates will be added to the health care system, the community care sector is likely to have an increasingly important role.

▸ **SSOs:** One participant indicated that SSOs have a role to play in the facilitation of PROMs, particularly to assess whether their operations are challenging the status quo and more importantly, getting the outcomes the hospital is looking for.

▸ **Research Granting Organizations:** Participants discussed the *"important role for research in this conversation." (Participant 6)*. On this note, one participant indicated that their organization has academic relationships with local universities and medical programs, in addition to a significant research arm within the organization, itself. Through these academic relationships, it is possible that procurement initiatives, such as incorporation of PROMs, may be driven by research programs focused on patient outcomes. Further, another participant noted that their stakeholders have been calling for increased PROMs research to develop a knowledge-base and inform future practice.

> **Key Finding:** Begin connecting different stakeholders, especially clinical, administrative and community-based representatives, for a variety of decision-making processes in order to establish an organizational culture of cooperation and engagement. Ideally, a large set of stakeholders should be engaged to advance the incorporation of patients within procurement processes. These stakeholders include industry, government, community care, SSO and academic representatives – each with their own unique role in health care and/or purchasing systems.

4.4 Identify High-Level Champions

Based on the successes of other jurisdictions, such as European countries, one participant suggested that PROMs initiatives would be best implemented through a **top-down approach** that is driven by support from leadership. For example, one participant noted that at a major pediatric institution, the CEO would walk the halls and ask the patient about their experience and if the parent(s) would interject, the CEO would continue to communicate specifically with the patient, which emphasized for other staff the importance of direct patient input.

4.5 Form Cross-Sectoral Partnerships

One participant suggested that the successful implementation of PROMs requires more **broad and deep partnerships between all levels of care** within the province, including amongst community, long-term care, continuous care and acute care organizations, including patients from each of these levels. To create these partnerships in a way that is meaningful, there must first be more of a recognition of the expertise that lies within each of these groups and the value of their joint expertise. This participant suggested that these partnerships could be formed on a regional or LHIN basis.

4.6 Potential Leading Organizations

Identification of a "leading organization" – an organization or group of organizations that will be most responsible for the incorporation and standardization of PROMs initiatives – is suggested to ensure **accountability, leadership and direction** to guide such initiatives. Potential leading organizations are discussed below based on interview participants' responses.

▸ **SSOs/GPOs:** The centralization of SSOs and GPOs has facilitated greater **sharing of best practices across organizations**, as one participant stated,

> *"**We do share information because we're with a large SSO.** We do get information on how other organizations are rolling things out or doing their evaluations. We have monthly meetings and then we have twice yearly face to face meetings, so we do regularly share information on that and that's valuable." (Participant 8)*

While this sharing has not yet been used to share patient feedback practices within the organizations included in this study, the **mechanisms for sharing exist and have the potential to be used** for feedback practices.

The centralization of purchasing has also increased the sophistication of contract negotiation and management practices across organizations, with one participant stating,

> *"We're [hospital] not trying to do it all individually at our organizations. For me, it's worked well to have the SSO who has all the technical expertise to put all of this together and to coordinate everybody and then to involve all of the organizations to give us all an opportunity to be part of every initiative… there was a time when it wasn't that way." (Participant 8).*

Given this unique role, one participant stated,

> *"I think that **procurement needs to take a lead role in giving people a sense of permission to do things differently**. We're allowed to be creative, we're allowed to negotiate, we're allowed to partner with suppliers – that's where we're going to see more value. And then I also think that procurement would take a lead role in working with the regional health authorities." (Participant 3)*

Despite these strengths, one participant suggested that it would be difficult for an SSO to lead the data collection aspects of PROMs initiatives because these organizations **do not have direct contact with patients or track patient outcomes**. Privacy concerns may also be an issue for SSOs.

▸ **LHINs:** Two participants suggested that incorporation of PROMs should be a LHIN-based initiative because LHINs are best able to **provide a care continuum** from hospital into long-term care, home and community – all areas where patients may interact with the health care system and thus, are in a position to collect PROMs. In addition, the LHIN may have a pre-existing community consultation-type model/panel that could encourage more collaborative input, including patient representation in procurement processes, such as evaluations.

▸ **Vendors:** Another participant suggested that since suppliers **already track products** for recall purposes, these organizations could be asked to take an extra step to assist with collection of PROMs data.

▸ **Hospitals:** Multiple participants suggested that hospitals would have an important role in collection of PROMs. In particular, it should be feasible for hospitals to **consult with their patients,** given that they are likely to have outreach to them through either patient panel, committees and/or consultation groups or by having clinicians connect with patients, directly. As with vendors, one participant suggested that some clinical programs may track products for recall purposes and thus, could further develop this effort to collect PROMs data.

▸ **Value Analysis Committees:** One participant suggested that the onus should be on designated procurement committees, such as value analysis committees, to invite patients into the procurement process and engage with them on a regular basis.

> **Key Finding:** Various organizations, including SSOs/GPOs, LHINs, vendors, hospitals and value analysis committees, have been identified as having the potential to lead the adoption, incorporation and scaling of PROMs initiatives. When selecting one of these organizations to be most responsible for the execution of PROMs initiatives, the following capacities should be considered: 1. Ability to connect with and influence multiple organizations and 2. Ability to interact with patients and/or collect their data.

4.7 Strategic Communication

Participants had several recommendations to support incorporation of PROMs through effective communication, as highlighted below.

▸ **Emphasize Quality, not Efficiency**: In order to gain organizational buy-in, particularly from clinicians and patients, organizations should emphasize that engagement activities and product selection meetings are primarily concerned with improving quality of care, rather than improving efficiency alone. Of the importance of this messaging, one participant stated,

> *"**Don't drive [patient engagement] from the perspective of the efficiency, drive it from the perspective of quality** and people will go 'Yea, I want to do that - I want to make it better'... For the most part, clinicians are just suspicious when [SSOs are] coming in and saying 'hey, we can make that more efficient'. They get suspicious and territorial ... We've got to make it about how to improve the quality and the safety." (Participant 9)*

Key Finding: Communicate any patient engagement activities from the perspective of improving quality of care, rather than efficiency.

▸ **Engage Senior Leadership**: The senior leadership team of an organization should be involved in high-impact procurement activities, as this ensures that such activities are well-understood as a fully supported organizational priority.

Key Finding: Include senior leadership in early stages of adopting PROMs for procurement. This will help gain buy-in and demonstrate organizational support.

▸ **Leverage Patient-Centered Care Philosophy**: Many efforts have been implemented or are currently under way to shift organizational culture towards a patient-centered philosophy. This mantra now appears in all government and hospital outreach and has become integrated into hospital culture. By positioning patient engagement activities for procurement as part of a greater patient-centered strategy, resistance to change can be reduced, with one participant noting that,

> *"First and foremost, one thing that everyone will get on board with is the focus on the patient - doctors get on board with that, nurses get on board, administration gets on board, **everyone working for the health system gets on board** with that. So, that's the main thing that would be focused on." (Participant 3)*

▸ **Open Forum Versus Direct Engagement**: Throughout the interviews, two key strategies for engaging patients were identified. The first is a regular, open forum in which patients are invited to participate, typically with clinical and procurement staff, to provide their opinions and priorities for a variety of issues, including supply chain. The second is a more direct approach, which actively seeks out relevant patients for specific purchasing decisions. Many organizations are choosing to **start with an open forum and then transition to more direct engagement activities.**

▸ **Consistently Connect with Patients**: It is important for organizations to ensure that patients know what to expect when participating in procurement discussions. This includes **providing feedback to patients as to how their input was incorporated** into a procurement decision once it has been made. Examples of how to do so are provided below.

> *"Some of the things that we've seen locally in order to get feedback and engagement ... [is] consistency. So, really building those relationships with the populations that they are trying to engage; having that regular opportunity to provide feedback. The community members that are engaged, I would say that once they start seeing that they can make a difference, I think that that's where things start coming together, is that **people see the value of participating because they're actually getting something out of it.**" (Participant 10)*

> *"Sometimes the closed loop is important and often people give feedback and then they never hear what happens. So, that, I think, is something that I've heard through the years is that people really do appreciate that when they've engaged in something to really try and make something better, that they want to hear how that turned out. **Useful engagement includes coming back to the person and letting them know what changed because of the feedback.**" (Participant 10)*

4.8 Consistent Understanding of Policy

Two participants noted that one of the first things that operations that have incorporated innovative procurement initiatives in the past have done is to **study what is and is not permitted** under the BPS Directive. Below, one participant from Ontario stated their organizations' learnings after further understanding policy:

"They found they were very surprised. They didn't have to bend or break the rules as much as they thought … [it] is not as restrictive as you think it is, and so, it's not actually productive for public purchasers to hide behind BPS and to use it as an excuse not to bring in a vendor for a conversation, not to explore alternative forms of contracts or even prevent them from reforming their own procurement system." (Participant 1)

This experience was similar in other provinces, as a participant from New Brunswick stated,

"When I consulted with the lawyer on this point … they said there's nothing in the New Brunswick procurement legislation that would stop us from doing a value-based procurement initiative." (Participant 3)

Given the misunderstandings that currently surround the BPS Directive, one participant suggested that the Ministry has a role to clarify, stating *"they [the Ministry of Government and Consumer Services] don't need to change any policies … all they need to do is **talk about BPS in a different way**." (Participant 1)*

Once the BPS Directive is better understood, organizations will be more inclined to make changes within their procurement practices. For instance, one participant referenced that the recent Health Sector Supply Chain Strategy emphasizes Data Integration and Analysis and that if people better understand the BPS Directive, it will be easier for those recommendations to be enacted. To do so will require supportive leadership to foster a change of culture regarding the BPS Directive, which as one participant noted, will be a long, protracted change.

4.9 Leverage Pilot Studies and Small Wins

Organizations will find that the process to engage patients for procurement will differ slightly for each contract and sharing practices across organizations has limited effectiveness due to the high customizability required. As a result, many organizations will have to develop and grow their own patient engagement practices. Participants who have already invested some time in this area recommended that organizations **begin with one or two departments** which have a pre-existing culture of patient-centeredness and with medium- to long-term lengths of stay. After experience dealing with the early adopters, practices can then be scaled across organizations. Of this process, one participant stated,

*"You need to start somewhere and it's probably good to **start small or focus on one specific disease as part of this whole process, and get your champions at the table and then drive some success out of that project so that you can use that as an example for future initiatives** to get other people on board and then you'll start knocking down these cultural barriers." (Participant 3)*

For more information regarding best practices to choose pilot sites, see 3.1 Selecting Early Adopter Sites.

4.10 Establish Organizational Processes for Sustainability

One participant spoke of the importance of operationalizing engagement processes with local partners. Given the often high turnover of health care delivery and support organizations, **maintaining procedure requires formal processes**. This can be particularly effective when an agreement is formed between the hospital, health authority and community, with one participant stating,

*"One of the things that we find so helpful in [our engagement processes] is that those [processes] also **hold the decision makers accountable** because we have had a lot of breakdowns in the past - you know, funding changes or we see a lot of turnover in our executives within the Health Authority quite often - and so, when priorities change due to change over in executive, we can quite often go back to those processes and be like, 'this is what we promised these people - we need to at least deliver on this aspect.' (Participant 10)*

Key Finding: Operationalize patient engagement activities so that they become common practice and do not require an active patient engagement agenda to maintain.

Appendices

Appendix 1: PROMs in Non-Procurement Processes

Participant responses revealed that although there is an increasing focus on PROMs in relation to procurement, other areas of the health care system, as described below, have more developed processes to operationalize the incorporation of PROMs.

▶ **Food Services:** At an Ontario hospital, patients partners have been engaged in a number of different committees and functions, including changes to food services (i.e., menus), as these changes directly affect them and their families. Similarly, kitchen staff with a Health Authority in British Columbia have worked with elders and knowledge holders in the community to learn how to make and procure culturally-appropriate food and have asked families for feedback via paper survey or interview.

▶ **Hospital Recruitment:** One participant noted that their organization has engaged patient partners to be involved in interviews for physicians and other staff members. To achieve this level of engagement, the participant discussed the organization experience, as detailed below.

> **Case Study:** Led by a non-profit organization that brings the patient voice into all health care work, the health care organization recently completed an approximately four-year process to plan services for rural care, including hospital, home and community care, from a patient-centered approach.
>
> Throughout this process, two patients provided user feedback, which led to a variety of different recommendations for program improvements related to efficiencies, new positions, roles and responsibilities, including:
>
> ▶ An increase from one internal liaison to two, which has extended hours to include on-call coverage
> ▶ To hire a nurse practitioner

▶ **Surgical Policies:** In British Columbia, there has been a lot of work done to incorporate PROMs and PREMs into surgical policies and processes, including those for cataract and bariatric surgeries. Leading this work is the National Surgical Quality Improvement (NCQI) Program, which has 24 sites across British Columbia and is focused on improved care through measurement and evaluation of outcome data. The NCQI Program is currently working on PROMs and PREMs to improve:

  o Surgical procedure wait times
  o Infections and other adverse outcomes
  o Integrated care pathways (i.e. enhanced recovery after surgery, pre-surgery optimization, etc.)

To gather PROMs and PREMs data, the NCQI Program administers questions via telephone conversation or survey 30 days following the surgery. Questions include:

  o Did you have to go back to the hospital/see a doctor for any reason?
  o Do you have any adverse outcomes?

This work is new and not yet province-wide; however, based on its findings, new surgical policies have already arisen, including incorporation of PROMs and PREMs into evaluations of care to improve surgical quality.

▶ **Patient-Oriented Research:** The province of British Columbia has been focused on developing patient-oriented research for the past three to five years. Currently in development is the Strategy for Patient Oriented Research, which is part of the academic health sciences network and has the objectives to involve patients in and improve their experience with the health care system.

Appendix 2: Benefits of PROMs in Procurement

Many participants indicated that they could not yet quantify the benefit that PROMs would have on their organization, as most do not currently capture patient feedback; however, several commented on benefits seen in other jurisdictions, expected benefits of using patient engagement, as well as benefits reaped from similar initiatives, such as clinician engagement.

> **Survey Results:** Participants were asked to list the **benefits** associated with incorporating patient-oriented measures in procurement processes and the top responses were improved patient care (80.7%), awareness of outcomes/results (61.3%), increased supplier/vendor accountability (38.7%) and cost savings and efficiencies (35.5%).

It should be noted that given the relatively early stage of incorporation of PROMs into procurement processes, many of these benefits are higher-level and indicate a cultural shift towards making decisions based on patient outcomes rather than cost or individual preferences.

Improved Patient Value

By increasing the level of patient engagement within their organizations, many participants noted a general improvement in 'patient value' and discussed the potential for patient engagement activities to become a way of both defining and evaluating what is valuable to patients, with two participants stating,

> *"I think we need to engage the patients in helping us to define what the value and the quality is. Well, why don't we talk to the people and then, you know, we create a paragraph on that in the RFP so that the supplier understands this is how we are defining quality and value from the client perspective, so, what can you do for us from there?" (Participant 3)*

> *"The only way to really measure [impact] is to look at things like patient-reported outcomes because we can say we did the surgery, you were discharged within a reasonable amount of time, you didn't have complications and you didn't have to come back to the hospital so, it was a success. But patients may say 'Well, I'm actually worse off than when I started. I could walk slowly but on my own but now I need a walker or a cane." (Participant 7)*

As noted by a participant in Ontario, when value is considered, quality and safety are often improved and people have better outcomes and are more satisfied with the overall product. One way to increase delivered value is by improving contract measures for patient-related products. One participant provided an example of the importance of value in the procurement of patient-related products.

> **Case Study:** As noted by a supply chain professional from New Brunswick, suppliers are marketing that, for example, their pacemaker will last for seven years; however, those measures are not being tracked.
>
> *"Maybe it doesn't last seven years. Maybe it only lasts three years…We ran into a situation in our province a couple of years ago where a supplier had a recall on their implantable devices because of the battery depletion rate and that component was not necessarily built in to a previous RFP that was done through one of the national group purchasing organizations. So, at the end of the day, all of the issues fell on the clinical program. They had to contact the patients; they had to rebook patients to come in and take out their devices and re-implant them and then the stress that that would cause a patient's life, as well…" (Participant 3).*

Improved Patient Outcomes

Some participants also highlighted the potential for patient engagement activities to improve the care and eventual health outcomes that patients experience. By adopting a VBP philosophy, organizations are now evaluating the total cost of a product against the health outcomes reaped, as one participant noted,

> *"As the hospitals are talking more about [patient-centeredness] and demonstrating the value, not budget, but value, so the quality is better, the safety is higher, people are getting better outcomes, they're more*

satisfied. So, they're not coming into your office and screaming at you. They're more satisfied with the overall product." (Participant 9)

Value of Patient Input

Two participants noted that their organizations are interested in having patient participation in procurement processes because it provides a different perspective. As stated by one participant, *"sometimes you step back and think outside of your box because you don't realize how 'nursing' you are or how 'clinical' you are … until you hear this voice saying, 'well, why would you even do that?' And you go 'What? Oh, okay.' And so you have to think, 'Okay, they don't understand why we're doing this'… I can remember when we were talking about something for patients, for wheelchairs, actually, and the patient said, 'Well, you've given us the binder and you put it there - why wouldn't you just put it on the back of the wheelchair?' and we went, 'We don't know. We don't know why we wouldn't do that.' So, we priced it out and by God, we're doing it." (Participant 2).*

Similarly, patients are also able to suggest whether a procedure was "successful" or not based on their perspective and experience. For instance, it is possible that some patients might say they are worse off than they were prior to the intervention, despite having a "successful" surgery. As noted by one participant, *"while it might tick all the boxes and be a successful surgery, patient-reported outcomes tell us whether it [the intervention] actually was right, because the definition of a successful surgery on our end is having the surgery treating the problem and not having adverse outcomes, but … not having an adverse outcome isn't the same as having a positive outcome." (Participant 7)*

Efficiency Gains/Cost Reduction

Several participants commented that integrating clinical consensus into purchasing decisions has yielded *"thousands of dollars" (Participant 8)* of cost savings throughout organizations.

Others felt that patient engagement in procurement is unlikely to reap cost savings, but represents an important shift from cost to value, with one participant stating,

> *"The financial side tends to take a hit on it [incorporation of PROMs] because, you know what, let's put it this way - if you've got an RFP … and you've got a product that's coming from China and the company from China says we're going to save 75% on what you currently buy now, but you know it's not the same quality and you want that … that's not going to survive. So, then financial ends up taking a back seat to quality products." (Participant 11)*

Community Relations

From an organizational perspective, one of the key benefits of engaging patients in procurement activities is the relationships that are built with the community. Participants discussed that patients who become regularly engaged in hospital activities become champions and advocates for the hospital in the community. Further, organizations are seen publicly to be engaging patients and seriously considering their feedback. Participants identified the following benefits:

> *"It would add a lot of credibility for the institution to have the patient involved." (Participant 5)*

> *"[Patient engagement] can have many factors, even from a funding factor in terms of — you have your foundation, these people are coming in, donating dollars, like it's endless what it could be by having that patient interaction in that tendering, being right in the front of things knowing that there's more than one product out there that could be selected, how it all works, how products work and it's a more informed consumer." (Participant 5)*

> *"For success to happen in the community, or even in a long term care facility to a certain extent, requires you know the patient to be happy with the product and be compliant with it, as well." (Participant 11)*

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