Designated Service Providers (DSPs): Based on an Analysis of Stakeholder Submissions

A Discussion Document & Working Paper

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A Collaboration Between
Legal Services,
Policy Research & Monitoring
and
Internal Task Team on DSPs

Authored By:

Phakamile W. F. Nkomo,

Senior Policy Analyst.

Policy, Research & Monitoring Division.

Contributor:

John Letsoalo

Senior Manager,

Legal Services

Correspondence: dsp@medicalschemes.co.za

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1. INTRODUCTION

1.1 Legal Framing of the Policy Problem

The regulation of designated service provider (DSP) arrangements falls squarely within the constitutional and statutory mandate of the Council for Medical Schemes (CMS). The Constitution requires that all exercises of public power be lawful, reasonable and procedurally fair, and that regulatory bodies entrusted with specialised oversight functions act to advance substantive justice, not merely formal compliance. In the context of healthcare financing, this mandate is inseparable from the constitutional imperative to progressively realise access to healthcare services, while safeguarding the sustainability and integrity of the systems through which such access is mediated. Regulation must therefore hold in careful balance the interests of beneficiaries, providers and medical schemes, mindful that the collapse of any one pillar imperils the whole.

The Medical Schemes Act entrusts the CMS with precisely this normative balancing role. It is not a passive registrar of scheme rules. Still, an expert regulator charged with supervising market conduct, preventing undesirable business practices, and ensuring that medical schemes operate in a manner consistent with fairness, equity and member protection. DSP arrangements, by their nature, implicate questions of access, affordability, competition, and consumer choice, while simultaneously serving as instruments of risk pooling and cost containment. The Act must therefore be interpreted purposively, recognising that regulatory silence on complex market arrangements is not neutrality, but abdication. Where practices give rise to material distortions, exclusion, or injustice, the CMS is not only empowered, but obliged, to intervene.

That intervention, however, must be exercised with restraint, rationality and constitutional fidelity. The Promotion of Administrative Justice Act (PAJA) requires that regulatory action be procedurally fair, informed by evidence, and proportionate to the mischief sought to be addressed. In contested policy spaces, legitimacy is not conferred by assertion of authority alone, but by demonstrable engagement with affected stakeholders, reasoned consideration of competing interests, and transparency in decision making. It is through such processes that regulatory choices acquire democratic validity and durability. The law does not demand unanimity; it demands justification.

This discussion document situates itself within that legal and constitutional framework. It does not presume a predetermined outcome, nor does it seek to displace lawful market mechanisms with rigid prescription. Instead, it proceeds from the understanding that sustainable regulation in a complex healthcare market must be

iterative, evidence-based and dialogical. By analysing stakeholder submissions and identifying impasse-breaking interventions anchored in law, economics and constitutional values, the CMS seeks to give practical content to its statutory mandate. In doing so, it affirms a foundational principle of our constitutional order: that regulation, when exercised with care, reason and humility, can reconcile competing interests in service of the public good.

1.2 Problem Statement

There is an impasse regarding the implementation of designated service provider networks (DSPs). Some stakeholders feel that copayments for going out of network are expensive and should be discontinued. In addition to this, they feel that DSP networks are inconvenient, inaccessible, and a barrier to market access for independent healthcare providers/practices; if not opaque. The alternative position is just as compelling. DSP networks are designed to keep beneficiaries within a restricted network, so they can benefit from accessing healthcare services at discounted prices/premiums, and keep their medical scheme solvent.

The Council for Medical Schemes (CMS) and the National Department of Health published a gazette called Undesirable Business Practices (UDBP) regarding DSPs, and welcomed submissions from the public. We have conducted a detailed stakeholder analysis and implemented a framework of analysis targeted at a balanced resolution. This discussion document presents a proposal for resolving the matter through stakeholder engagement. We propose that stakeholders are given a menu of options to consider for implementation. The collective agreement can take the form of the preliminary guidelines on DSPs put forward as an example in the appendix of this discussion document.

1.2 Context

Figure 1 provides a detailed account of the root causes of stakeholder positions.

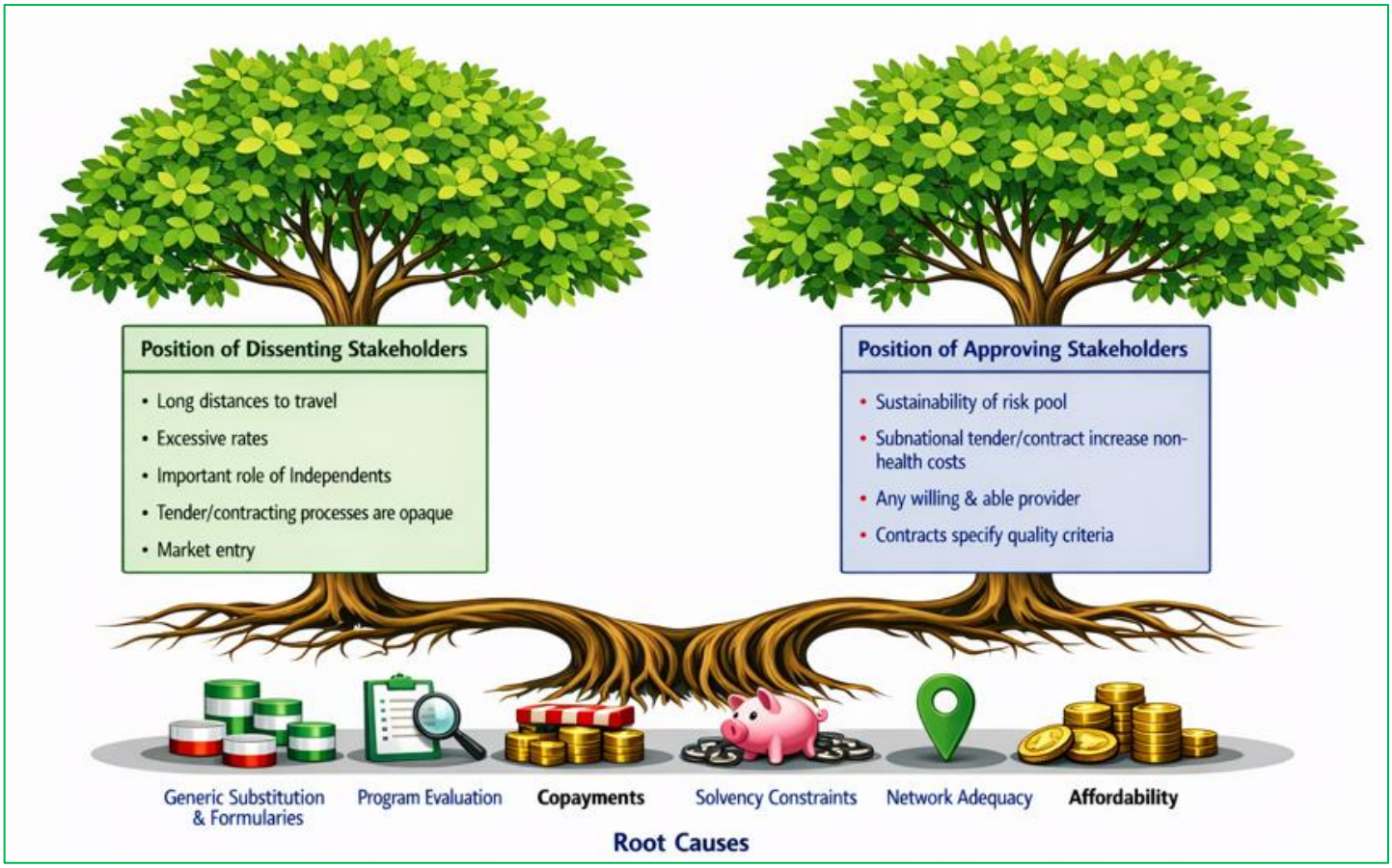


Figure 1: Problem Tree
Note: Figure generated by policy analyst using Copilot (in enterprise data protected mode).

1.3 Purpose

The purpose of the document is to demonstrate that the Council for Medical Schemes (CMS) conducted a detailed and extensive stakeholder analysis. The stakeholder analysis is based on submissions related to the Undesirable Business Practice Declaration (UDBP) on the implementation of Designated Service Provider (DSP) networks. This analysis will feed into an envisioned stakeholder engagement process, which is guided by preliminary recommendations within this discussion document. The methods of this analysis were intended to give a balanced purview of the issues, such that leverage points are identified to break the impasse over the implementation of DSP networks. It is in this spirit that we go the extra mile in describing the framework of analysis we used in arriving at the preliminary recommendations for discussion. This purpose statement will be supported by the pursuits listed below.

Firstly, this document will report the results of a stakeholder analysis of submissions made by industry participants. The stakeholder analysis will use principles of stakeholder theory within a social network analysis methodological context. This will establish profiles of influence and power, but establish who holds what

information, and whether such information is distributed equally across the stakeholder network, or even whether the same information is available to establish a coordinated and strategic implementation of DSP networks. To be sure, a sociocentric network analysis is used, as opposed to an egocentric network analysis seeking a zero-sum game outcome. All to identify coalitions that need to be satisfied, and bottlenecks that impede strategic complementarities.

Secondly, this document will identify a contract path that incentivises credible commitment by all stakeholders and prospective participants of DSP networks. This will be done by using the identified stakeholder issues and interests to broker impasse-breaking commitment, by proposing a menu of policy enablements driven to optimise collective outcomes.

Thirdly, learnings from managed competition/regulated competition will draw out opportunities for routine monitoring and a supporting mixed bag of tested interventions in voluntary health insurance markets. Supporting the process of implementing the Final Findings and Recommendations of the Health Market Inquiry (HMI).

1.4 Objectives

- To conduct a stakeholder analysis and social network analysis, identifying stakeholder issues and coordination problems.
- To propose an impasse-breaking menu of coordinating interventions to build credible commitment among all stakeholders.
- To propose guidelines for DSPs that will guide the stakeholder engagement discussions.

2. METHODS

2.1 Framework of Analysis

This framework of analysis describes the rationale behind the analysis of the Undesirable Business Practice (UDBP) Declaration on designated service provider (DSP) networks. The objective of the analysis is to identify stakeholder interests and to find a unifying thread/leverage points that can be proposed as options that stakeholders can consider to break the impasse on the DSP matter. Pursuant to this, we have devised a framework of analysis that we believe will assist with this and support the proposed guidelines we will present to stakeholder for their input.

2.1.1 A framework for finding leverage points

The Council for Medical Schemes (CMS) has received stakeholder submissions on the Undesirable Business Declaration (UDBP) on designated service providers DSPs. The submissions have been analysed and show divergent preferences across stakeholders. The CMS has had to develop a framework for analysing the submissions to provide a discussion document for stakeholder engagement. A menu of choice options has been identified to break the impasse the industry finds itself in on this issue. Figure 2 shows a logic model of how we have analysed and identified stakeholder issues and arrived at a balanced approach for breaking the impasse.

Figure 2 illustrates that the balanced approach was struck by employing an integrated framework of analysis. The framework seeks to find leverage points, a menu of proposed interventions to find a workable solution.

The integrated framework is comprised of:

- **Stakeholder theory and social network analysis**: to find strategic complementarities through proposing interventions that broker bonds and bridges across stakeholders holding different positions and preferences for policy solutions.
- **New Institutional Economics and Mechanism Design Decision Spaces**: A mechanism needs to be implemented, such that a menu of proposals can be decided on amicably. That said, those resulting undertakings need to be specified, monitored and enforced.
- **Managed Competition in Healthcare**: These are characteristics that need to be applied in a voluntary health insurance environment. We use these to validate beneficial proposals for breaking the impasse on DSPs.

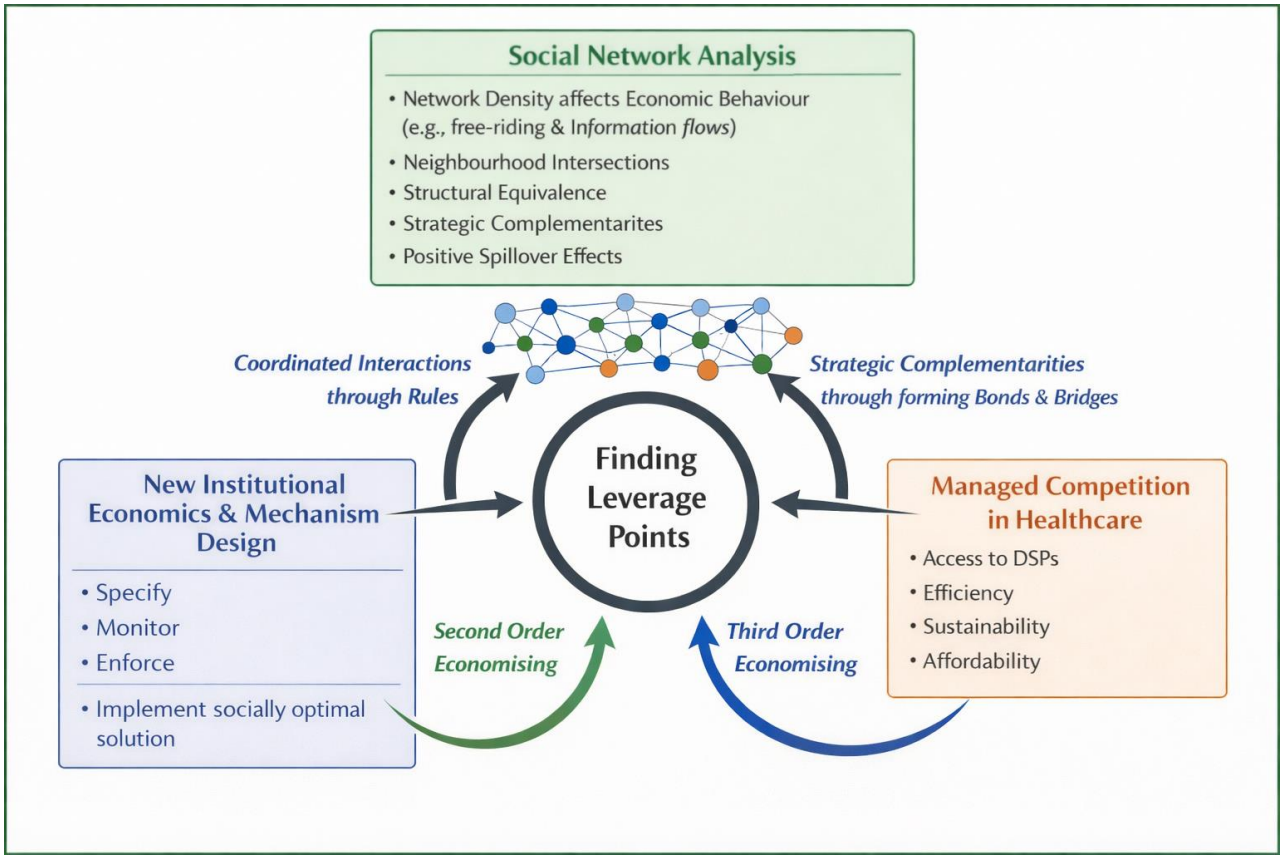


Figure 2: Integrated framework of analysis
Note: Figure generated by policy analyst using Copilot (in enterprise data protection mode).

2.1.1.1 Social network analysis

The power of integrating network analysis with stakeholder theory

Social network analysis and stakeholder theory are valuable frameworks for understanding complex systems and resolving policy problems by:

- Mapping relationships and identifying low levels of connectedness between stakeholders,
- Finding common positions/complementarities, and
- Identifying key actors,
- Detecting hidden power structures, and
- Addressing diverse interests.

The integration of social network analysis (SNA) and stakeholder theory allows a comprehensive view of the landscape and develops more aligned policy strategies across stakeholder groups. Forging strategic formations beneficial to all interested parties. Blanchet and James (2012) tested this in a health policy environment and found the methodology revealing and helpful in improving health systems.

Significance of observation made through network analysis for policy analysis

The concentration of nodes (relative closeness or distance in the positioning of nodes around each other) in a network/cluster/community has an impact on the behaviour of organisations or people represented by those nodes (Akerlof, 1997; Granovetter, 2005). To be clear, it has an impact on compliance and free-rider behaviour.

In terms of information flows, the more distant connections between clusters/communities, the better information flows and reduced information asymmetry. Granovetter (1973) and Burt (2004) called this the "strength of weak ties". By the same logic, the less the relationship between communities, the more embedded the norms and beliefs within communities. Granovetter (2005) called the lack of relationships between neighbourhoods of nodes "structural holes". Structural holes create polarities and diminish the ability to broker deals between stakeholders of differing policy positions (McPherson et al., 2001).

Thus, the flow of information within a network, or the commonality of stakeholder positions across communities/network clusters, provides a way of creating social capital (Granovetter, 2005). Alternatively, this provides the opportunity to close structural holes through bridging relationships across a neighbourhood of nodes.

Social capital provides a path for forming strategic complementarities and positive spill-over effects for the common good of nodes within and across communities and neighbourhoods (Granovetter, 2005; Burt, 2004). Ghaffar and Hurley (2020) concurred by stating that increasing bonds between nodes in the neighbourhood (micro level of the network). Additionally, bridging relationships between communities (macro level of a network), increases strategic complementariness and social capital. If this can be done among stakeholders over a plethora of issues, the effects of market failure introduced by information asymmetries can be reduced.

Network positions shape bargaining power and information flows affecting contracts between providers and payers; therefore, a sponsor/regulator can augment deadlocks by altering the contextual environment by forming bonds and bridges between differing stakeholder positions and communities. Thus, creating social capital and spillover effects through strategic complementarities. This has relevance for managed competition/regulated competition, which we will discuss in a later sub-section.

Establishing credible commitment

According to Meadows (1999), effective policy interventions and strategies require finding leverage points, that create the greatest outcome with minimal effort. This requires understanding structural/contextual issues in a community, such as information flows, connectivity and trust (Meadows, 1999; Ostrom, 2010). By doing so, this changes the paradigms of thinking and resolving complex problems (Meadows, 1999; Ostrom, 2010) .
Part of the challenge is understanding is establishing incentive compatibility (Hurwicz, 1973), through understanding similarities/complementarities across stakeholder positions. The complementarities should be used to align incentives to implement a sustainable social choice solution (Maskin, 1999).

Figure 3 provides an analogy of how stakeholder theory and social network can be used to achieve a social choice rule (distribution of preferences according to a menu of alternative options) (Hurwicz, 1973; Maskin, 1999). If we can identify stakeholder positions, affiliations and emerging alliances of similarity, we would be able to broker amicable and binding solutions.

Figure three (panel) shows stakeholder salience. The regulator will have to find a fitting mechanism to build a value chain among the stakeholders to keep DSPs. Panel 2 shows how nodes (circles) representing stakeholder issues, and arcs (links) stakeholder interests (affiliations of stakeholder groups ageing on similar matters. What is clear in panel 2 is that two different communities are not connected. The trick is to use the regulators' brokering capacity to create a bridge among stakeholders who are communicating and have divergent positions.

In panel 2, nodes E and D share structural equivalence on the basis that they both are linked to node. A (Wasserman and Faust, 1994; Lizardo and Jilbert, 2023). Nodes D and E also have a regular equivalence with nodes B and C, although they are not connected (Wasserman and Faust, 1994; Lizardo and Jilbert, 2023) (Wasserman and Faust, 1994; Lizardo and Jilbert, 2023). This is due to the neighbourhood intersection they share with node A. This is important as the nodes are policy issues, and the links represent affiliations of stakeholders. Understanding the structure of the network helps with brokering solutions that create credible commitment among stakeholders.

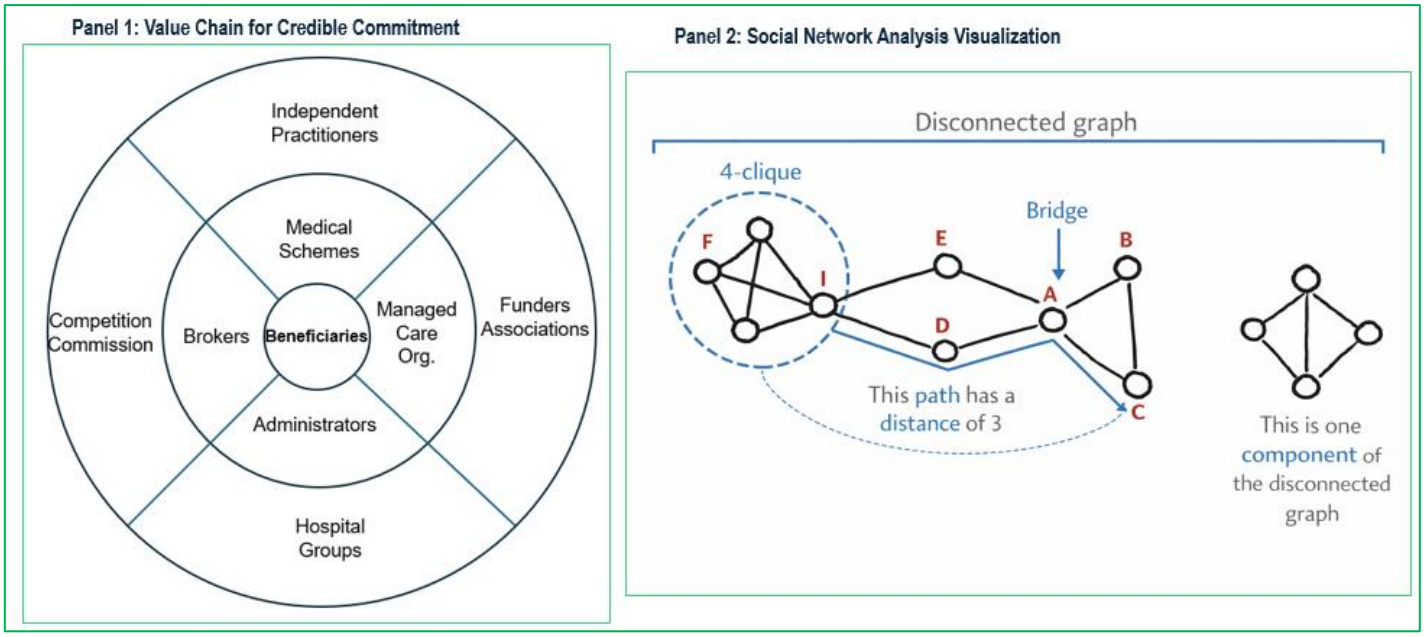


Figure 3: Strategic complementarities and social network analysis
Source (Panel 2): Modification of Grandjean (2021), p. 4.

2.1.1.2 The New Institutional Economics & Mechanism Design

Mechanism Design

Hurwicz (1973) and Maskin (1999) were two of three recipient of the Nobel Prize in Economics Science in 2007 for establishing the framework of 'mechanism design'. Mechanism design is a mechanism designed to result in an optimal allocation resources, such that all those who participate in a transaction optimise their welfare; given that each party to the transaction is maximising their own interests. Thus; mechanism design finds a feasible contract zone, that satisfies all participants to a transaction and enhances credible commitment to hold to the agreement. The mechanism is an implementation of rules (referred to as institutions) that govern the process of following through with a transaction. The value of mechanism design is that participants to a transaction are able to transact and receive optimal payoffs even when there is no equal distribution of information. All while maximising their individual interests, achieving and sticking to a cooperative outcome. 'Incentive compatibility" (alignment) is achieved through the feasible region of trade where a cooperative outcome is found.

Effectively, mechanism design is about designing a solution for implementation through incentivising parties and coordinating their actions through rules. To make this more tangible what the principle of mechanism design means with the framework of analysis we are developing, the mechanism is the process of choosing a range of interventions that increases strategic complementarities for better social outcomes, in an environment

of information asymmetry and self interests. The mechanism will be arrived at through acknowledging embedded positions across stakeholder communities (attained from stakeholder analysis). We will then use these identified positions in proposing a series of interventions for designated service provider (DSPs) arrangements, such that DSPs are sustainable through alignment of identified strategic complementarities.

Ultimately, this mechanism design framework for designing optimal social choices, through stakeholder engagement based on the preliminary guidelines for DSPs. A sustainable outcome can be arrived at with "incentive compatibility" (Hurwicz, 1973, p. 23) if: stakeholder don't unilaterally veto rules (Maskin, 1999); and realise that there need to be penalties (Ostrom, 2010) for non-compliance when implementing the rules based mechanism.

The New Institutional Economics

Douglass North (1992) stated that in the absence of perfect information, markets are not efficient, this is because of transaction costs. In our specific policy scenario, transaction costs abound (see analysis of stakeholder submissions in results section). Specification of the goods and services, monitoring and specification become crucial in dealing with transaction costs (North, 1992).

The reason the specification of rules, monitoring and enforcement of rules related to designated service provider (DSP) networks is important is due transaction costs, which are caused by information asymmetries. The method of accessing health services within open and closed network arrangement for people living with chronic conditions needs to be specified and communicated in an accessible way, and that right need to be accessible within reason. In such scenarios "rights are imperfectly or incompletely specified" (North, 1992, p. 7), and contracts rendered incomplete due to stakeholders being "boundedly rational" (Hart and Moore, 1999 , p. 134). These monitoring costs increase the more disperse and impersonal the networks arrangements (North, 1992; Akerlof, 1997).

Without proper specification, monitoring and enforcement, ideologies about fairness multiply, especially when each community of stakeholders has polarised and imbedded perceptions of fairness (Williamson, 1971; North, 1992). Meaning we are not able to implement practical and feasible rules-based mechanism as stakeholders will veto, shirk and will not remain compliant with DSP rules (Hurwicz, 1973; North, 1992; Maskin, 1999; Ostrom, 2010).

Williamson (2000) amplifies the effects that transaction costs have on the optimising transaction outcomes. He call "second order economizing" aligning incentives through have periodic contract renewal (Williamson,

2000 , pp. 559-600). This would mean that DSP contracts/tender arrangement will need to be renewed. The Health Market Inquiry's final findings and recommendations report proposes that this should happen every three years for DSP contracts (HMI Report, 2019 , p. 226). Williamson (2000) advises that once the "second order economizing" has been established, there is still a need to deal with "agency theory", such as moral hazard and principal agent problems. This is ex-post incentive alignment and consideration of pricing arrangements to keep incentives aligned should be done continuously. In terms of the purpose of the preliminary guidelines, issues such as access and availability of health providers in the network should be reviewed. Williamson's second order and third order economizing the "science of contracting" close to the "science of choice" (Ménard and Shirley, 2022 , p. 50).

Ostrom (2010) applied the Institutional Analysis and Development (AID) framework to situations where the nature of a good fell within the classification of a "common-pool resource" (CPR) (Ostrom, 2010 , p. 641). These types of goods are similar to those that Harding described in "The poverty of the common". People cannot be excluded from participating in the consumption of these CPR, but their consumption is not for the collective good, but for personal use (Ostrom and Ostrom, 2018).

Effectively, CPR create a lot are vulnerable to free-rider behaviour. This can happen if there are no penalties for going out of network when a member purchases a benefit option with a DSP network and uses an open network to access health services. This is why a penalty is required when dealing with CPRs, otherwise the system will result in the 'Tragedy of the Commons' (Hardin, 1968). Specifically, free riding, for which results in people getting benefits that weren't paid. We provide an analogy that explains the impact of behaviour associated with CPRs in the next subsection. A mechanism needs to be introduced through the DSP guidelines to monitor and enforce free-rider behaviour.

2.1.1.3 Managed competition in healthcare

Enthoven (1993) developed a framework for regulated competition, called manged competition. The framework hinges on using microeconomic principles and balancing them with what is practicable and feasible . Mostly because healthcare is a complex product and members do not have all the information required to use it optimally. His vision was a sponsor, either an association of employers, or a regulator should step in to create market coordination. This is to be done by: i) providing health insurance consumers with information; and ii) ensuring that health providers of health provide quality that is cost effective and efficient while meeting health consumers' needs. This is the correcting mechanism for market failure related to agency theory which Williamson (2000) "third order economizing" (see the section covering the New Institutional Economics above).

Wynand van de Ven, Beck and Buchner et.al. (2013) adapted Enthoven's framework, which was initially developed for a Health Maintenance Organization (HMO) system, for application in voluntary health financing/insurance systems. They developed ten principles that need to be implemented in voluntary health systems. This framework of analysis will adopt this principles of regulatory competition to propose interventions to remedy identified policy issues from stakeholder submissions emanating from the undesirable business practice declaration of 2017. These same principles were tested on the South African medical schemes industry by van den Heever (2024).

2.1.1.4 Analogy: finding a "Social Choice Rule"

This section provides an example of how to engage with two poignant issue emanating from analysing the stakeholder submissions on the Undesirable Business Practice Declaration on DSPs. The issues are: i) A preference for no copayment when members of medical schemes go out of network during a health seeking episode; the other is ii) a strong preference for not having sub-national contracts/tender agreement due to the impact that this will have on medical scheme overheads (non-health costs).

Figure 4, panel 1, illustrates the impact that these two preferences will have on premiums and accessing to healthcare. Panel 2 shows a classification of the nature of goods. The top right quadrant expresses access to health services as per the rules of a benefit option. The benefit options provide risk cover through open community rating (joint use of risk funds, and exclusion of benefits for those not within benefit option's community. The bottom left quadrant (fig. 4, panel 2), describes common pool resources (private consumption outside the rules of the option outside of the rules or constraints of the benefit option). This common pool resources encourage free riding as utilisation happens outside of rules and controls, with catastrophic implication for other risk pools/community in the medical scheme.

Figure 4, panel 1 illustrates the implications of the two preferences:

- Preference for no sub-national contracts with providers:
  - people go out of network due to lack of accessible networks
  - this increases premiums and creates solvency pressure for the medical scheme community
- Preference for not paying copayments/penalties for going out of network:
  - The consumer surplus enjoyed for having access to healthcare at discounted prices diminishes
  - This creates free riding as benefits are enjoyed at the expense of the rest of the medical scheme community.

This analogy illustrates that a mechanism is required to arrive at choice of alternatives that industry role players can commit to. There needs to discussion are an optimal menu of solutions that stakeholders can agree to, and stick to.

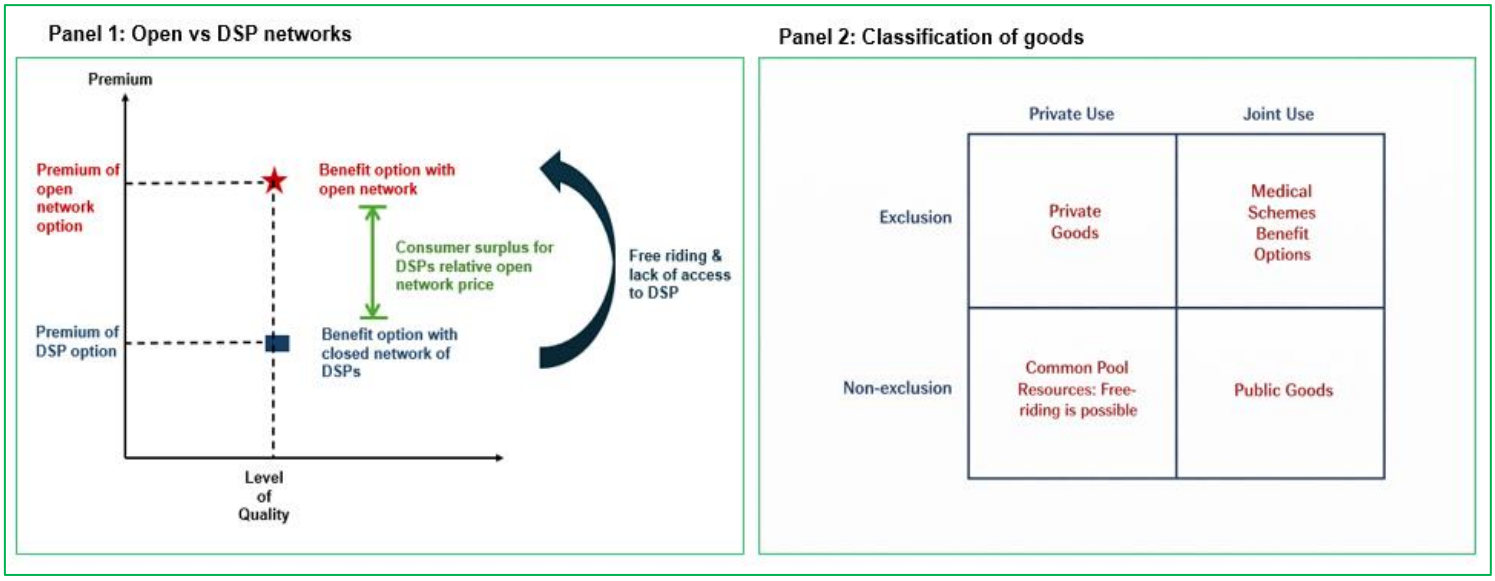


Figure 4: To specify, monitor, and enforce
Source (panel 2): Adapted from Ostrom (2010), p. 645.

2.1.1.5 What have we learned

We have learned that:

i) We need to use stakeholder theory together with network analysis to understanding stakeholder interest in the context of stakeholder communities and positioning of interests relative to identifiable interest groups and ties. This will have to identify opportunities broker the implementation of impasse breaking interventions.

ii) We need to provide a menu of options related to each impasse breaking recommendation to gain buy-in and credible commitment to socially optimal outcomes and monitor these agreements as part of the rule of the game in participating in DSP network.

iii) We need validate each proposed intervention against established principles of regulated economics in voluntary health financing/insurance domains.

2.2 Stakeholder Identification & Mapping

Figure 5 provides a representation of how stakeholder profiles were derived, in order to allocate some qualitative scoring of stakeholder salience. The stakeholder salience score was not used for the network

analysis. The emphasis was rather on weight of stakeholder affiliations, based on how many stakeholder groups raised a similar policy issue.

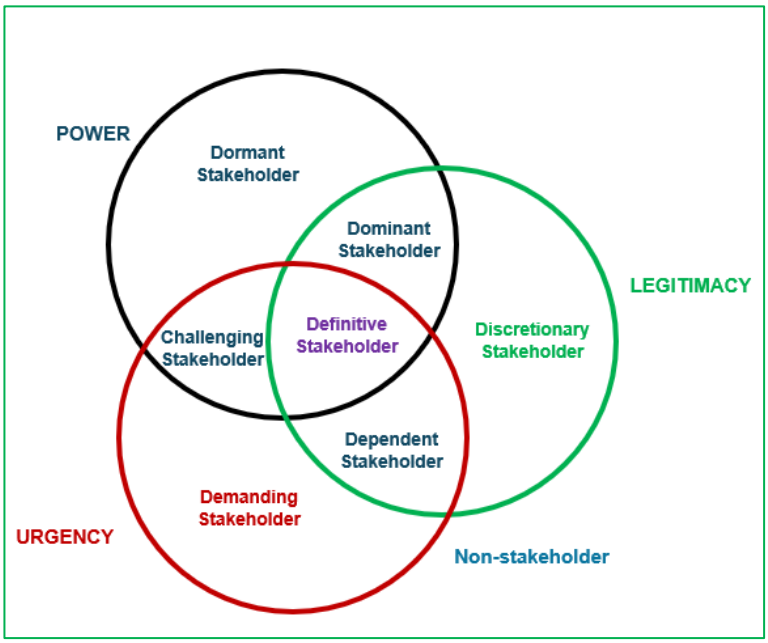


Figure 5: Venn diagram -- Typology of stakeholder profiles
Source: Adaptation of Mitchell et al. (1997), p. 874.

Figure 6 provides a stakeholder classification of identified stakeholders. The classification is based on the stakeholder salience, and contributes to understanding the weight of expectation across identified stakeholders.

CLASS OF STAKEHOLDER		IDENTIFIED ENTITIES
Primary Stakeholders	Definitive	Beneficiaries, CMS, Medical Councils or Regulators
Expectant Stakeholders	Dominant	Medical schemes, Administrators, MCOs, Hospital Groups
	Dependent	Independent Community Pharmacies, Other Healthcare Disciplines
	Challenging	Self-regulating Bodies for health Funders
Latent Stakeholders	Discretionary	Financial Advisories, Independent Hosp. in Natal
	Dormant	Pharmaceutical Chain Stores, Pharmaceutical Company
	Demanding	Subcontracted FFS managed care organisation

Figure 6: Stakeholder salience

Figure 7 provides is a stakeholder mapping.

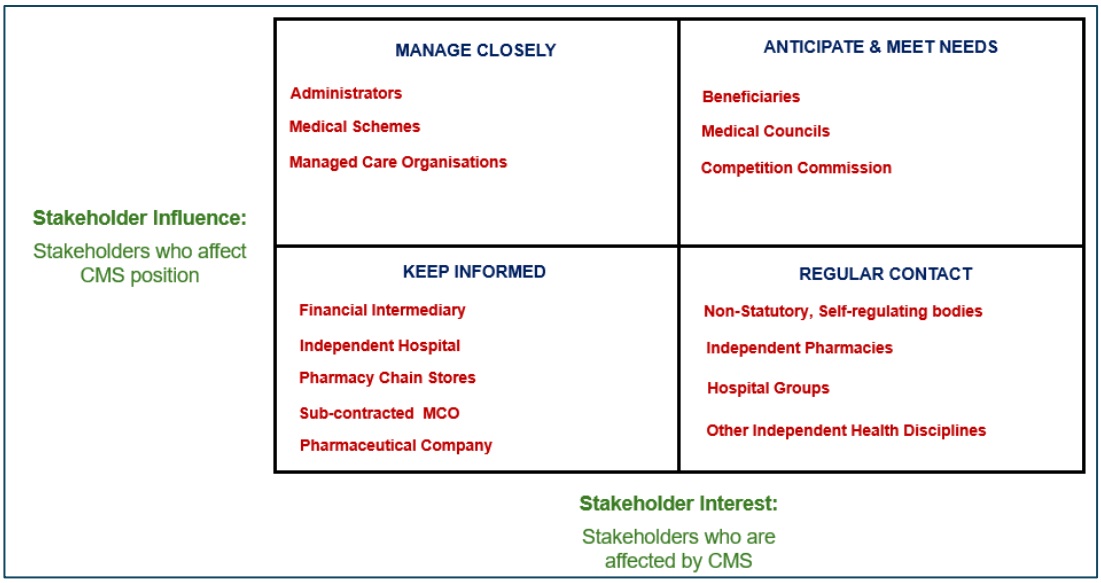


Figure 7: Stakeholder mapping – influence and interest

2.3 Data Source

The data are primary data emanating from submission directly related to the UDPB declaration on DSPs in 2017.The CMS Legal Division compiled the submissions. The data were compiled and

2.4 Data Management

The complied submissions were populated in Microsoft Excel. The data were coded and classified according to our stakeholder salience methodology for stakeholder analysis. To conduct the social network analyses, we used Gephi (version 0.10.1). Gephi is a social network analysis visualisation software application. The application also computes descriptive statistics for network path analysis. Data management and coding the blind data blind in Microsoft Excel before importing the data set to Gephi on the local drive of the desktop. So as to not share sensitive material on the open-source platform.

2.5 Analysis

We also used Microsoft Power BI to check the internal validity network structure, and check for human error in the data preparation process. We also used the Tassel visualisation tool, a Power BI visualisation tool, to provide a report of the sets of overlapping stakeholder issues by stakeholder groups (groups of stakeholder entities). This visualisation is provided alongside the network visualization graph (see the results section).

To capture the complexity associated with stakeholder interests and common alliances of interests between stakeholder entities (dimension of affiliation to sets of interests); we conducted a transformation of the data. This is required when creating a visualisation of network structures that have nodes that are not similar in nature.

In this case, we were describing a network structure of stakeholder interests (node type 1) and stakeholder entities (node type 2). Specifically; a bi-partite model for networks that, for example; have nodes describing members and their affiliation to specific clubs or groups. The data were transformed to reflect a structural relationship where the stakeholder entity is the link (affiliation) between stated stakeholder interests, as follows:

- stakeholder interest ↔ stakeholder entity ↔ stakeholder interest, as opposed to
- stakeholder entity ↔ stakeholder interest ↔ stakeholder entity.

A force directed layout method was used to position the nodes and edges of the network diagram. Approximate repulsion, and gravity algorithms were on during the layout iterations. A log-lin transformation was implemented to enhance the identification of true communities/clusters (strong links between nodes). A procedure to minimise overlaps between nodes and edges was implemented for visual clarity of the network structure.

Based on the lay-out of the network diagrams for each domain on stakeholder issues, it was evident there were two components/clusters/communities within each of the network structures. We therefore ran the modulatory command, which is appropriate for such networks. Modularity is a procedure for community identification and validates the strength of the community by generating a modularity score. The higher and more positive the modularity score ($-1 \leq \mathbb{Q} \geq 1$), high higher the likelihood that stakeholder interests are embedded within a community. In this instance, a high and positive modularity score means an interest is embedded within a community/cluster. Thus; embeddedness means the distribution of the links/edges around nodes is significantly different from a simulated random distribution. The colour of the nodes reflect which community the nodes belong to (see results section)

Degree centrality was calculated at micro-level (local level) of the network structure. This was to count the number of times stakeholders mentioned a stakeholder interest. The size of the nodes indicate instances when a stakeholder interest was trending within a community (see results section).

3. RESULTS

In this section we describe the make up of stakeholder submissions responding to the UDBP Declaration on DSPs. We classify the submissions within six domains/policy issues. Each policy issue is unpacked to reveal stakeholder positions and interests on each identified policy issue. We report which stakeholder issues are of greatest concerns across stakeholder affiliations, and identify these issues that share commonalties in light of the potential alliances that may ensue across stakeholder groups/affiliations. We identify that these are the median issues that may assist in formulating a menu of intervention options that stakeholders may buy into during stakeholder engagement. The results will be used to make preliminary recommendations which support the draft guidelines on DSPs.

3.1 Stakeholder Submissions

Figure 8 reports a proportional count of stakeholder submissions. Almost two-thirds (61%) of the submissions were made by beneficiaries, followed by independent medical practitioners (16%), then independent pharmacies (12%). Other submissions were representing organisations or associations, so the low percentages in submission does of represent the relevance/weight of the submissions.

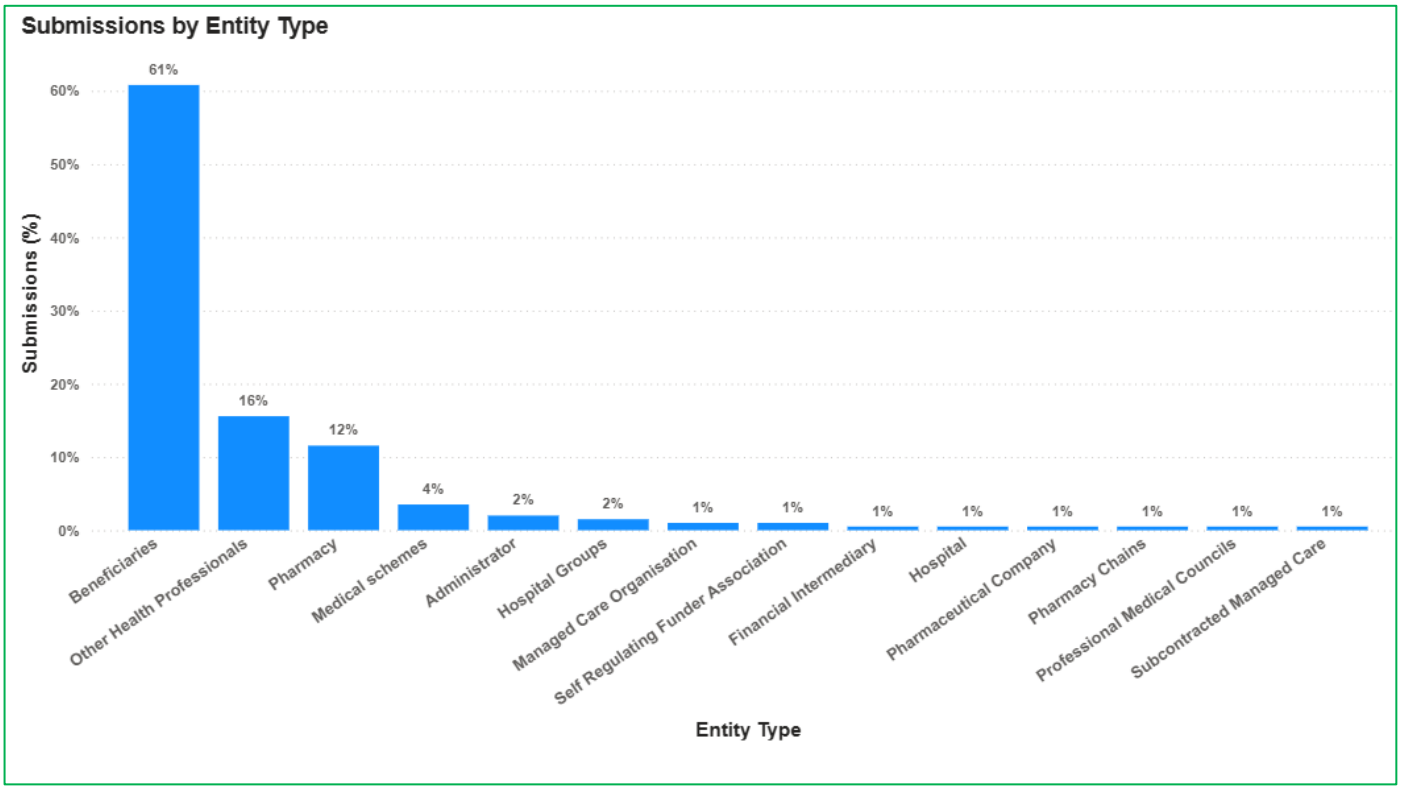


Figure 8: Stakeholder submissions (proportional count)

3.2 Classification of Stakeholder Issues

Figure 9 reports the configuration of stakeholder submissions into: i) six domains/policy issues of interest; and ii) the underling stakeholder issues associated with each domain/policy issue of interest.

The stakeholder issues were further broken down into stakeholder interests. These are reported in the next section.

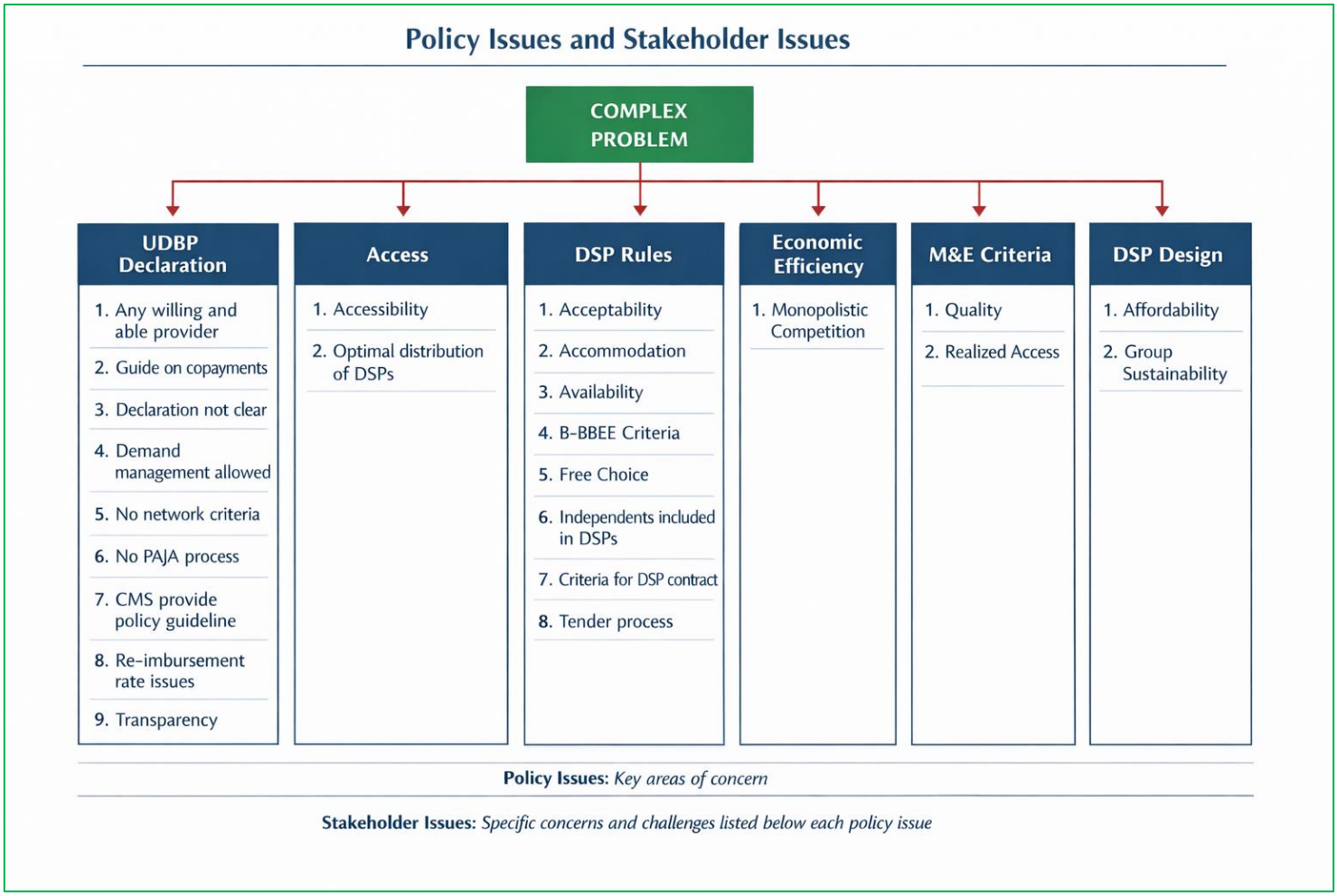


Figure 9: Classification of stakeholder issues

Note: Figure generated by policy analyst using in Microsoft 365 Copilot (in enterprise data protection mode).

3.3 Stakeholder Issues regarding UDBP Declaration

3.3.1 Word cloud: the publication of UDBP declaration

Figure 10 reports the stakeholder interests associated with the direct comments made by stakeholders on the wording/comments made in the Undesirable Business Practice Declaration (UDBP) of 2017, regarding designated service provider (DSP) networks.

Figure 10, panel 1, is a word cloud showing stakeholder interests of dissenters from the current DSPs as implemented. Panel 2 (fig. 10) is a word cloud showing stakeholder interests of those supporting the current DSPs as implemented.

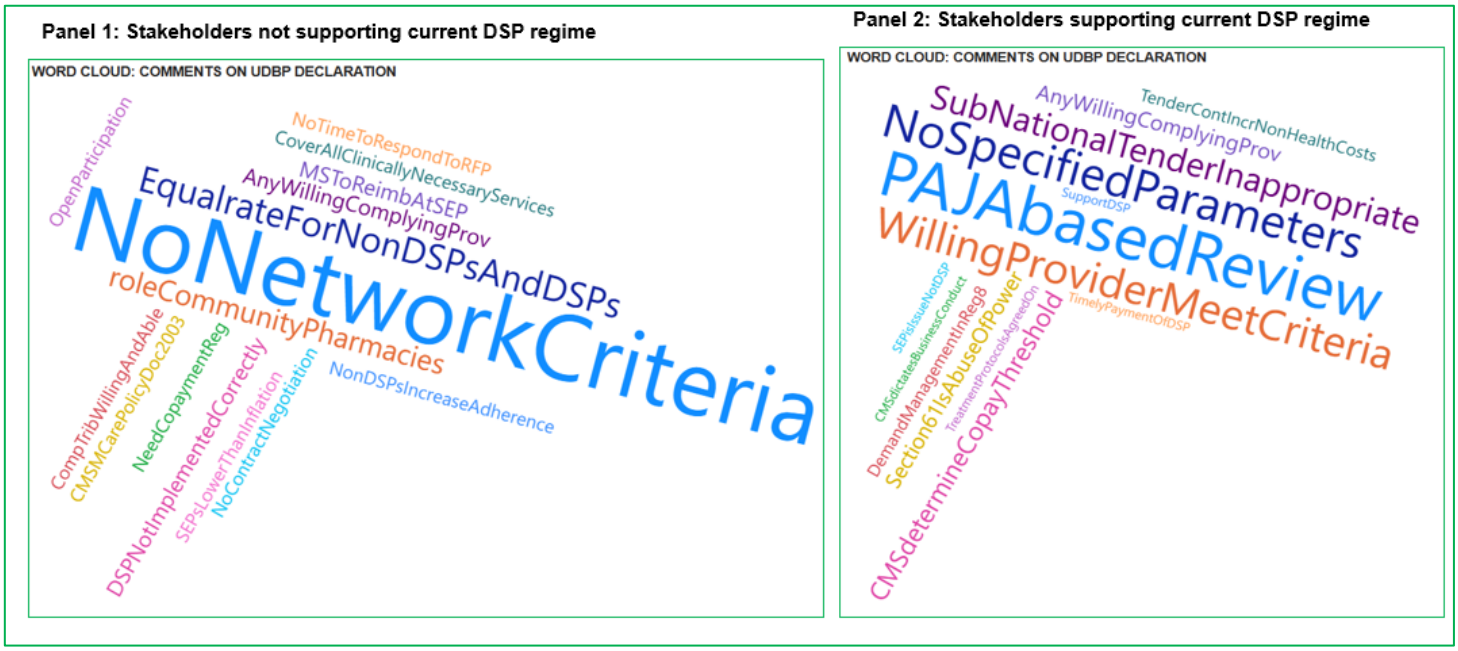


Figure 10: Word cloud -- stakeholder comments on UDBP declaration

Stakeholder interests of dissenters of current DSPs (panel 1, fig. 10)

The top five stakeholder interests were pertaining to the following concerns:

i) **No network criteria** -- there are no network criteria;

ii) **Equal rate for nonDSPs and DSPs** -- the reimbursement rates should be equal for non-DSP and DSP arrangements;

iii) **Role of community pharmacies** – the role of the good work of community pharmacies is being ignored;

iv) **Any willing and complying provider** – the criteria for market entry should be that any independent provider should be able to participate in DSP networks; and

v) **DSPs not implemented correctly** – the current way of implementing DSPs is not correct.

Stakeholder interests of supporters of current DSPs (panel 2, fig. 10)

The top five stakeholder interests were pertaining to the following points/concerns:

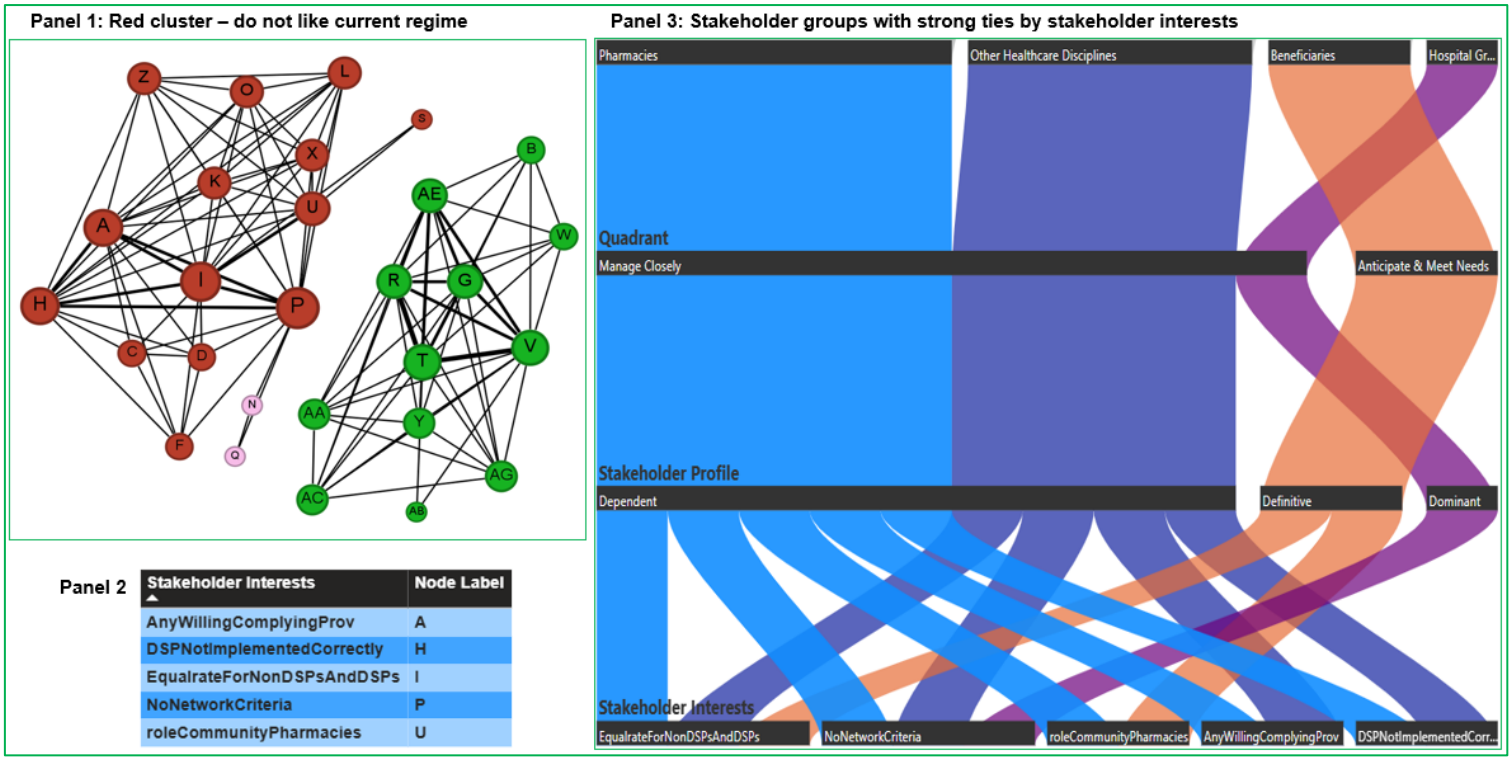
i) **PAJA based review** – the process of reviewing the DSPs should be based on the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000);
ii) **No specified parameters** – there are no specified parameters in the declaration that on the parameters of DSPs outside of the Regulations;
iii) **Willing providers meet criteria** – willing independent providers must meet the criteria of participating in a DSP network;
iv) **Sub-national tender inappropriate** – a contracting/tender framework at sub-national level is inappropriate; and
v) **CMS determine copayment threshold** – the CMS should determine an appropriate copayment threshold.

3.3.2 Bi-model network analysis: the publication of UDBP declaration

3.3.2.1 Bi-modal network analysis: dissenters' comments on UDBP declaration

Figure 11 reports results from a social network analysis visualization/diagram, on dissenters/non-supporters of the current DSP regime/framework. The domain of interest is on comments directly related to the publication of the UDBP declaration.

Panel 1, (fig. 11), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two divergent communities (dissenter community has red nodes and the supporter community has green nodes). Panel 2 (fig. 11), shows the stakeholder interests of dissenters, and labelling of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 11), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.



Panel 2

Stakeholder Interests	Node Label
AnyWillingComplyingProv	A
DSPNotImplementedCorrectly	H
EqualrateForNonDSPsAndDSPs	I
NoNetworkCriteria	P
roleCommunityPharmacies	U

Figure 11: Bi-modal network analysis – position of dissenters on UDBP declaration

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the dissenting community is the set of nodes {A, H, I, P, U}, as reflected in panel 1 (fig.11).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 11):
  - **Consensus on 'Any willing and complying provider'** (connectivity to node A): Pharmacies and Other Healthcare Disciplines;
  - **Consensus on 'DSPs not implemented correctly'** (connectivity to node H): Pharmacies and Other Healthcare Disciplines;
  - **Consensus on 'Equal rate non-DSPs and DSPs**' (connectivity to node I): Pharmacies, Other Healthcare Disciplines, Beneficiaries and Hospital Groups;
  - **Consensus on 'No network criteria'** (connectivity to node P): Pharmacies, Other Healthcare Disciplines, and Hospital Groups;

- **Consensus on 'Role of community pharmacies'** (connectivity to node U): Pharmacies and Beneficiaries.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups).
- **Set {I, H, P} forms a clique:**
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'I') -- 'Equal rates for nonDSP':
    - ✓ 'Pharmacies',
    - ✓ 'Other Healthcare Disciples', and
    - ✓ 'Beneficiaries'.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'H') -- 'DSPs not implemented correctly':
    - ✓ 'Pharmacies', and
    - ✓ 'Other Healthcare Disciples'.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'P') -- 'No network criteria':
    - ✓ 'Pharmacies',
    - ✓ 'Other Healthcare Disciples', and
    - ✓ 'Hospital Groups'.

- **Set {A, I, P} forms a clique:**
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'A') -- 'Any willing and complying provider':
    - ✓ 'Pharmacies', and
    - ✓ 'Other Healthcare Disciplines'.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'I') -- 'Equal rate non-DSPs and DSPs':
    - ✓ 'Pharmacies',
    - ✓ 'Other Healthcare Disciples', and
    - ✓ 'Beneficiaries'.

  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'P') -- 'No network criteria':
    - ✓ 'Pharmacies',

- ✓ 'Other Healthcare Disciples', and
- ✓ 'Hospital Groups'.

- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.3.2.2 Bi-modal network analysis: supporters' comments on UDBP declaration

Figure 12 reports results from a social network analysis visualization/diagram, on supporters of the current DSP regime/framework. The domain of interest is on comments directly related to the publication of the UDBP declaration.

Panel 1 (fig. 12), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two divergent communities (dissenter community has red nodes and the supporter community has green nodes). Panel 2 (fig. 12), shows the stakeholder interests of supporters, and labelling of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 12), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

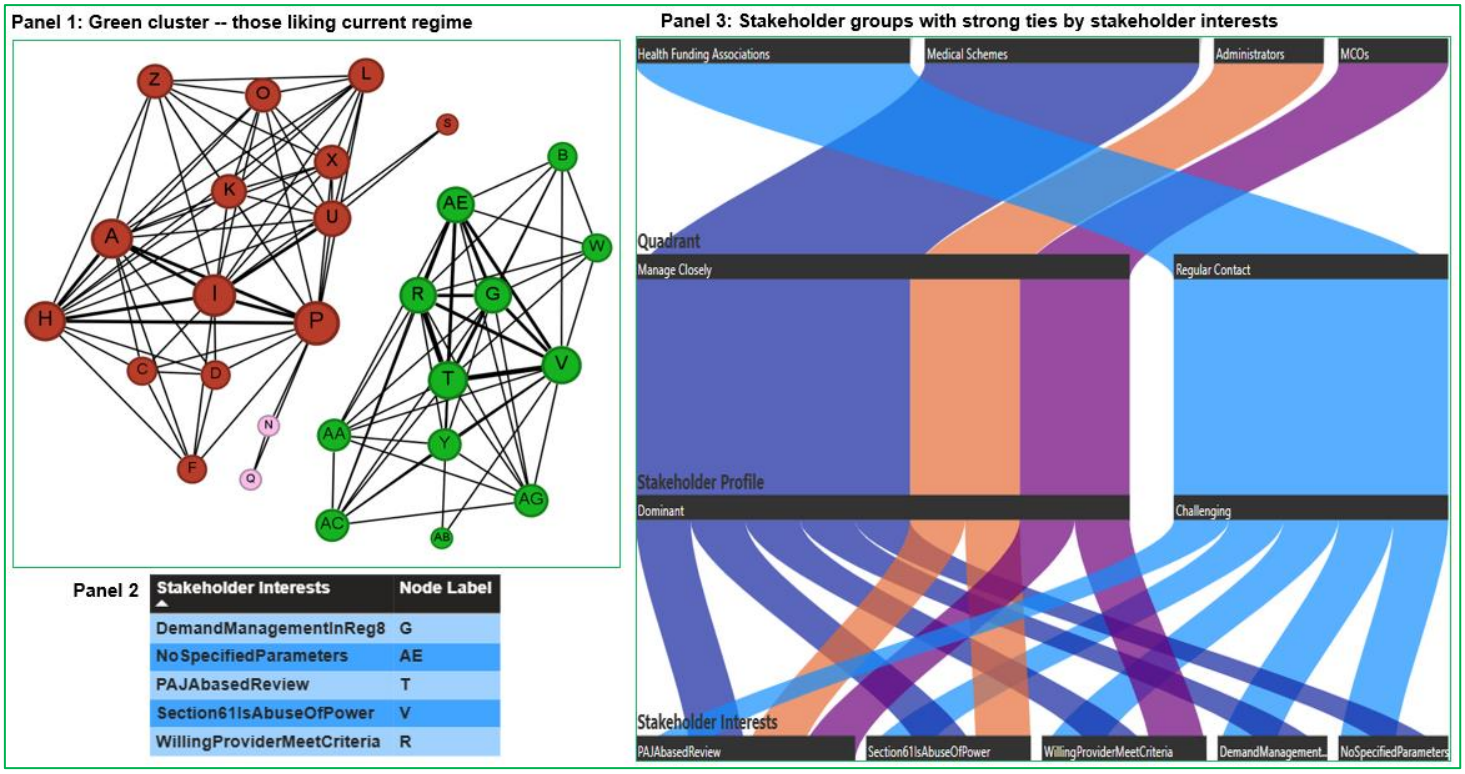


Figure 12: Network Analysis -- position of supporters on UDBP Declaration

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the supporting community of stakeholders is the set of nodes {G, AE, T, V, R}, as reflected in panel 1 (fig.12).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 12):
  - **Consensus on 'The is demand management in Regulation 8'** (connectivity to node G): Medical Schemes, Health Funding Associations;
  - **Consensus on 'No specified parameters om DSPs'** (connectivity to node AE): Medical Schemes, Health Funding Associations;
  - **Consensus on 'PAJA based review process**' (connectivity node T): Medical Schemes, Health Funding Associations, Managed Care Organizations;
  - **Consensus on 'Section 61 is an abuse of power'** (connectivity to node V): Medical Schemes, Health Funding Associations, Administrators;

- **Consensus on 'Willing providers who meet DSP criteria may participate in DSP'** (connectivity to node R): Medical Schemes, Health Funders Associations, Managed Care Providers.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups).
- **Set {G, R, T, V} forms a clique:**
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'G') -- 'There is demand management in Regulation 8':
    - ✓ 'Health Funder Associations', and
    - ✓ 'Medical Schemes'.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'R') -- 'Willing providers who meet DSP criteria may participate in DSP':
    - ✓ 'Medical Schemes',
    - ✓ 'Managed Care Organization', and
    - ✓ 'Health Funding Associations'.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'T') -- 'PAJA based review process':
    - ✓ 'Health Funding Associations',
    - ✓ 'Medical Schemes',
    - ✓ 'Administrators', and
    - ✓ 'Managed Care Organization'.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'V') -- 'Section 61 is an abuse of power':
    - ✓ 'Health Funding Association',
    - ✓ 'Medical Schemes', and
    - ✓ 'Administrators'.
- **Set {G, AE, V} forms a clique:**
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'G') -- 'There is demand management in Regulation 8':
    - ✓ 'Health Funder Associations', and
    - ✓ 'Medical Schemes'.

- Stakeholders' connectivity (affiliation) to stakeholder interest (node 'AE') -- 'No specified parameters om DSPs':
  - ✓ Health Funding Association', and
  - ✓ 'Medical Schemes'.
- Stakeholders' connectivity (affiliation) to stakeholder interest (node 'V') -- 'Section 61 is an abuse of power':
  - ✓ Health Funding Association',
  - ✓ 'Medical Schemes', and
  - ✓ 'Administrators'.

- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.4 Stakeholder Issues regarding Access to DSPs

3.4.1 Word cloud: access to DSPs

Figure 13 reports the stakeholder interests related to access to DSP networks. Figure 13, panel 1, is a word cloud showing stakeholder interests of dissenters from the current DSPs as implemented. Panel 2 (fig. 13) is a word cloud showing stakeholder interests of those supporting the current DSPs as implemented.

Stakeholder interests of dissenters of current DSPs (panel 1, fig. 13)

The top three stakeholder interests were pertaining to the following concerns:

i) '**Access distance'** – the distance to DSP network is too far;
ii) **'Need better provider allocation'** – provider network need to be better distributed for access; and
iii) **'DSPs increase cost of medicine travel'** – travelling cost to DSPs increases cost of medicine.

Stakeholder interests of supporters of current DSPs (panel 2, fig. 13)

The top three stakeholder interests were pertaining to the following points/concerns:

i) **'Sub-national tender inappropriate'** – sub-national tender/contracting framework is inappropriate;
ii) **'Tender contract increase non-health costs'** – sub-national tender/contract framework will increase non-health costs; and
iii) **'DSPs have ease of contact'** – DSP network are easily accessed.

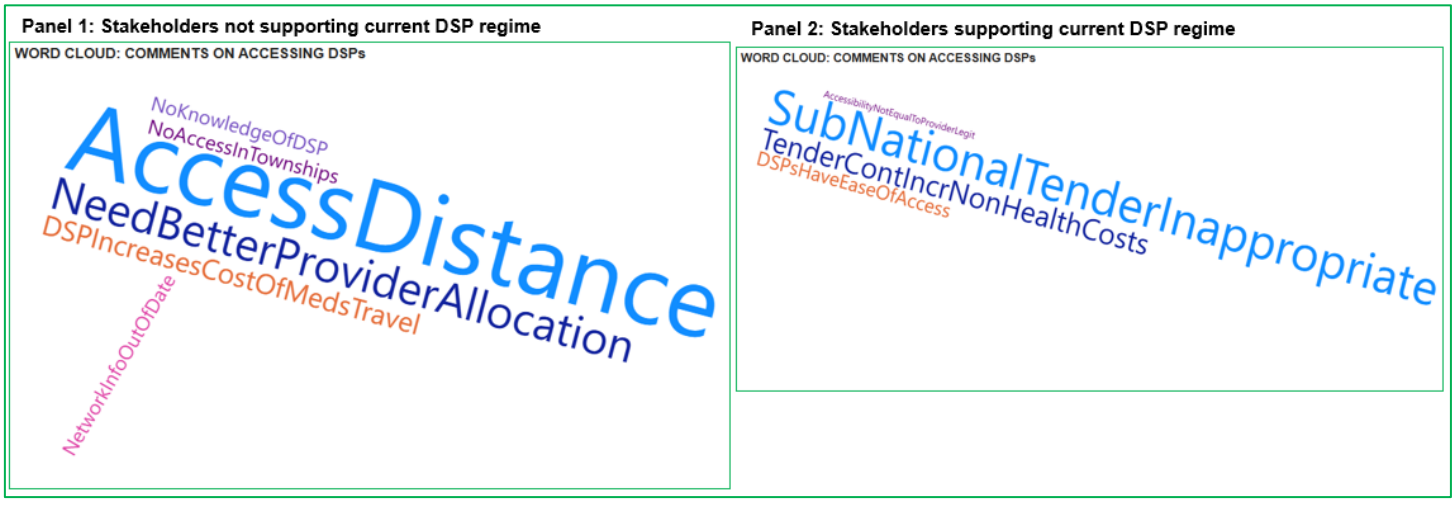
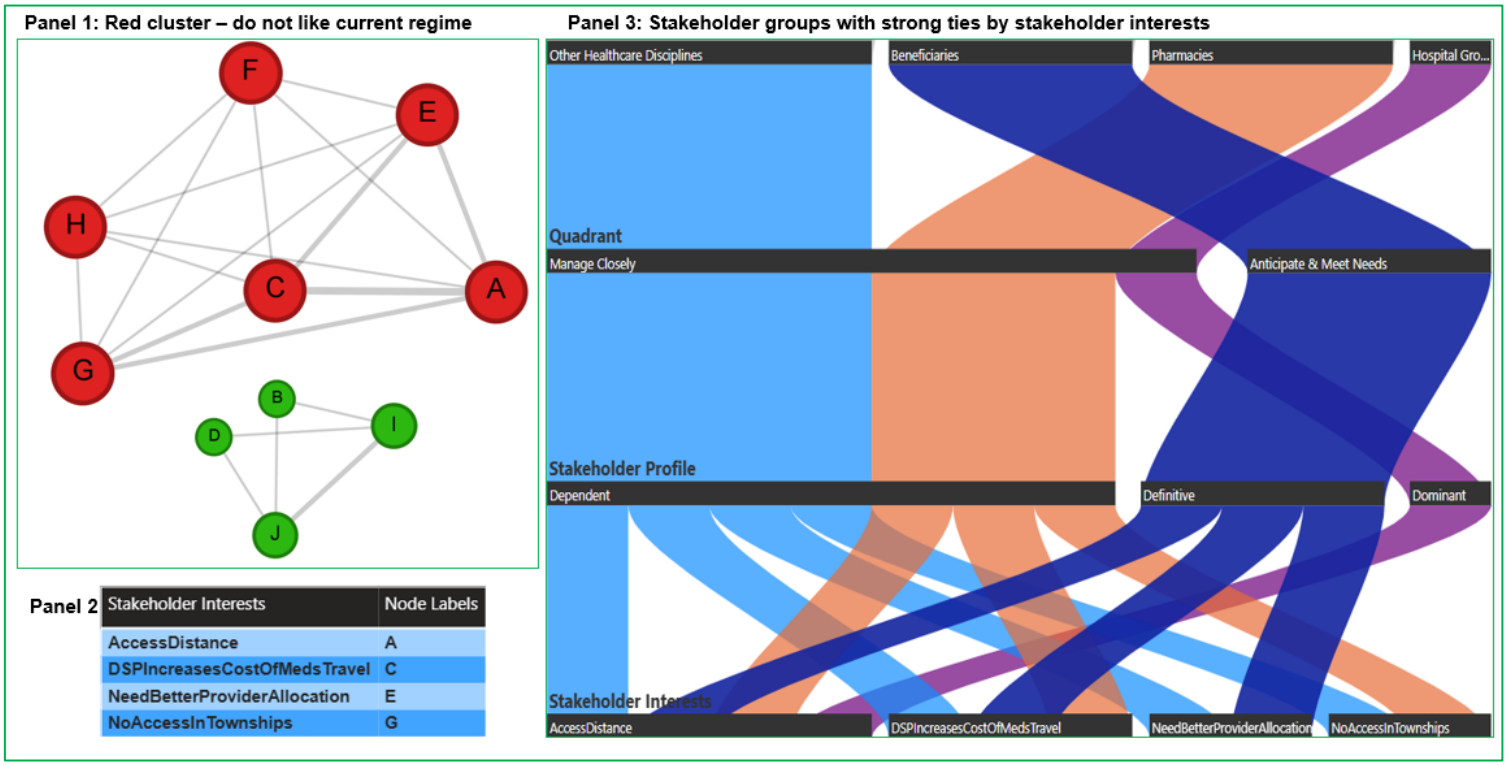


Figure 13: Word cloud -- Stakeholder comments on access to DSPs

3.4.2 Bi-model network analysis: access to DSPs

3.4.2.1 Bi-modal network analysis: dissenters' comments on access to DSPs

Figure 14 shows a social network analysis visualization/diagram, on dissenting stakeholder issues regarding access to DSPs. Panel 1 (fig. 14), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes and the supporter community has green nodes). Panel 2 (fig. 14), shows the stakeholder interests of dissenters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 14), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.



Panel 2

Stakeholder Interests	Node Labels
AccessDistance	A
DSPIncreasesCostOfMedsTravel	C
NeedBetterProviderAllocation	E
NoAccessInTownships	G

Figure 14: Network analysis -- position of dissenters on access to DSPs

i) <u>Connection and positioning of nodes</u>:

- The nodes that are at a central position in the network analysis visualization for the dissenting community is the set of nodes {A, C, E, G}, as reflected in panel 1 (fig.14).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)

- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 14):
    - **Consensus on 'Access Distance'** (connectivity to node A): 'Pharmacies', 'Other Healthcare Disciplines', and 'Beneficiaries'.
    - **Consensus on 'DSP increases cost of medicine travel'** (connectivity to node C): 'Beneficiaries', 'Pharmacies' and 'Other Healthcare Disciplines'.
    - **Consensus on 'Need better provider allocation**' (connectivity to node E): 'Other Healthcare Disciplines', and 'Beneficiaries'.
    - **Consensus on 'No access in townships'** (connectivity to node G): 'Pharmacies', and 'Other Healthcare Disciplines'.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups);
- **Set {A, C, E} forms a clique:**
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'A') -- 'Access Distance':
        - ✓ 'Other Healthcare Disciplines',
        - ✓ 'Beneficiaries',
        - ✓ 'Pharmacies', and
        - ✓ 'Hospital Groups'.
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'C') -- 'DSP increases cost of medicine travel':
        - ✓ 'Other Healthcare Disciplines',
        - ✓ 'Beneficiaries', and
        - ✓ 'Pharmacies'.
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'E') -- 'Need better provider allocation':
        - ✓ 'Other Healthcare Disciplines', and
        - ✓ 'Beneficiaries'.
- **Set {A, C, G} forms a clique:**
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'A') -- 'Access Distance':

- ✓ 'Other Healthcare Disciplines',
- ✓ 'Beneficiaries',
- ✓ 'Pharmacies', and
- ✓ 'Hospital Groups'.

- Stakeholders' connectivity (affiliation) to stakeholder interest (node 'C') -- 'DSP increases cost of medicine travel':
  - ✓ 'Other Healthcare Disciplines',
  - ✓ 'Beneficiaries', and
  - ✓ 'Pharmacies'.
- Stakeholders' connectivity (affiliation) to stakeholder interest (node 'G') -- 'No access in townships':
  - ✓ 'Other Healthcare Disciplines', and
  - ✓ 'Pharmacies'.

- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.4.2.2 Bi-modal network analysis: supporters' comments on access to DSPs

Figure 15 reports results from a social network analysis visualization/diagram, on supporters of the current DSP regime/framework. The domain of interest is on comments access to DSPs.

Panel 1 (fig. 15), shows a bi-modal network analysis visualization/diagram with two divergent communities (dissenter community has red nodes and the supporter community has green nodes). Panel 2 (fig. 15), shows the stakeholder interests of supporters, and labelling of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 15), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

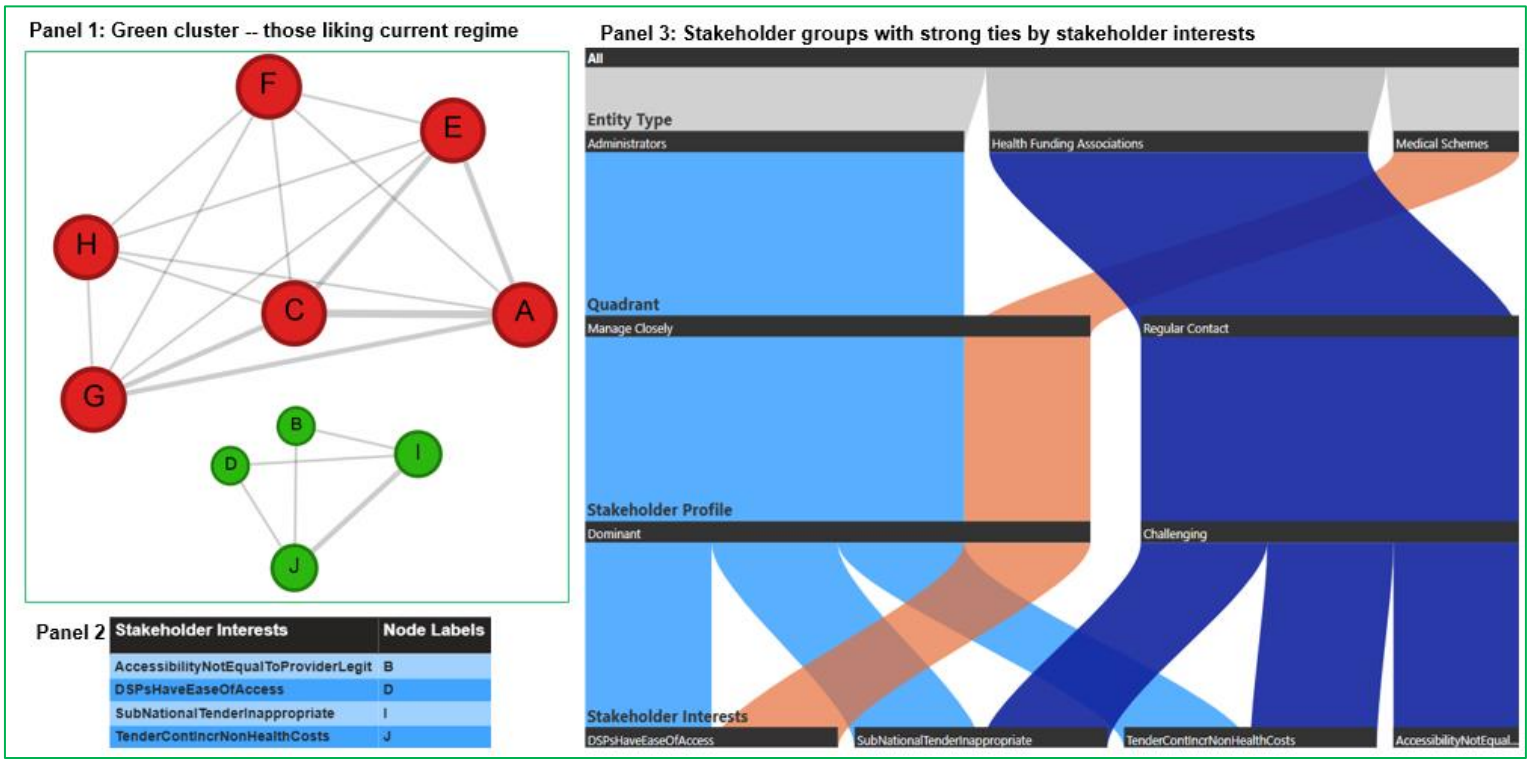


Figure 15: Network analysis -- position of supporters on access to DSPs

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the supporting community is the set of nodes {I, J}, as reflected in panel 1 (fig.15).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 15):
  - **Consensus on 'Sub-national tender/tender framework is inappropriate'** (connectivity to node I): 'Administrators', and 'Health Funding Associations'.
  - **Consensus on 'Tender contributes to non-health costs'** (connectivity to node J): 'Administrators', and 'Health Funding Associations'.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups);
- **Set {B, I, J} forms a clique**:
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'B') -- 'Access doesn't mean provider legitimacy in DSP network':
        - ✓ Health Funding Associations.
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'I') -- 'Sub-national tender/contracting framework is inappropriate':
        - ✓ Administrators; and
        - ✓ Health Funding Associations.
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'J') -- 'Tenders increase non-health costs':
        - ✓ Administrators; and
        - ✓ Health Funding Associations.
- **Set {D, I, J} forms a clique:**
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'D') -- 'DSPs have ease of access':
        - ✓ 'Medical Schemes,' and
        - ✓ 'Administrators'.
    - Stakeholders' connectivity (affiliation) to node 'I' -- 'Sub-national tender/contracting framework is inappropriate':
        - ✓ 'Health Funding Associations,' and
        - ✓ 'Administrators'.
    - Stakeholders' connectivity (affiliation) to node 'J' -- 'Tenders increase non-health costs':
        - ✓ Administrators; and
        - ✓ Health Funding Associations.
- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) <u>Neighbourhood intersections</u>:

- Neighbourhood intersections are present

- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.5 Stakeholder Issues regarding rules of DSPs

3.5.1 Word cloud: rules of DSPs

Figure 16 reports the stakeholder interests related to access the rules of DSP networks. Figure 16, panel 1, is a word cloud showing stakeholder interests of dissenters from the rules of DSPs as implemented. Panel 2 (fig. 16) is a word cloud showing stakeholder interests of those supporting the current DSPs as implemented.

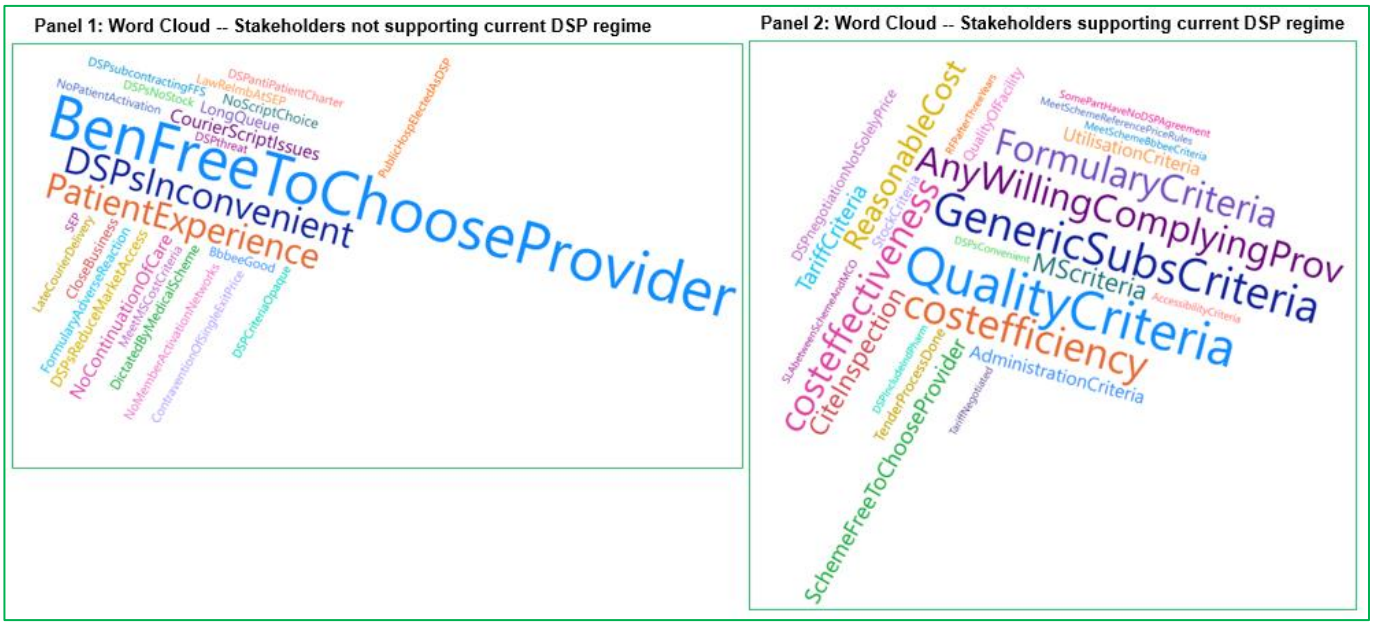


Figure 16: Word Cloud -- stakeholder comments on rules of DSPs

Stakeholder interests of dissenters of current DSPs (panel 1, fig. 16)

The top five stakeholder interests were pertaining to the following concerns:

i) **'Beneficiaries free to choose provider'** – beneficiaries should have freedom of choice regarding which practitioner they see.

ii) **'DSPs inconvenient'** – DSPs are not convenient, e.g., provider network is not in beneficiaries' commute, or network closes too early.

iii) **'Patient experience'** – beneficiaries enjoy one-on-one relationship with their provider of choice.

iv) **'Courrier script issues'** – the medicine delivered is based on an old prescription.

v) **'No continuation of care'** – the DSP network doesn't provide the beneficiary with a coordinated network for care continuation.

Stakeholder interests of supporters of current DSPs (panel 2, fig. 16)

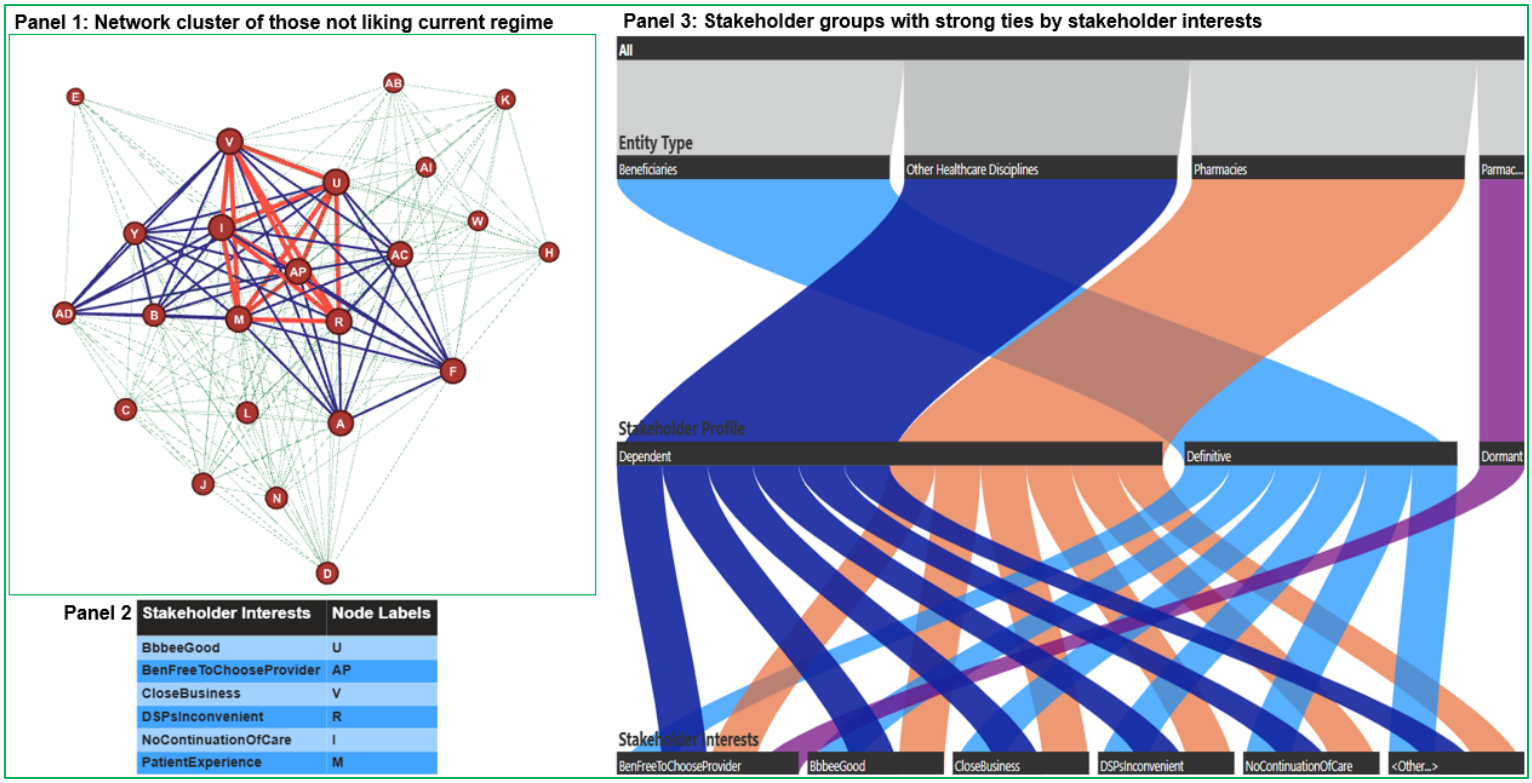
The top five stakeholder interests were pertaining to the following points/concerns:

i) **'Quality criteria'** – DSP contracts specify quality criteria.
ii) **'Generic substitution criteria'** – DSP contracts specify a requirement to use generic substitution.
iii) **'Cost efficiency'** – the DSP contract required the DSP network provider to cost efficient.
iv) **'Any willing complying provider'** – participation in a DSP network does any willing provider who complies with contract criteria.
v) **'Cost effective'** – the DSP contract requires DSP network provider to be cost effective.

3.5.2 Bi-model network analysis: rules of DSPs

3.5.2.1 Bi-modal network analysis: dissenters' comments on rules of DSPs

Figure 17 shows a social network analysis visualization/diagram, on dissenting stakeholder issues regarding rules of DSPs. Panel 1 (fig. 17), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram of the dissenter community (stakeholders not in favour of the current implementation of DSPs). Panel 2 (fig. 17), shows the stakeholder interests of dissenters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 17), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.



Panel 2

Stakeholder Interests	Node Labels
BbbeeGood	U
BenFreeToChooseProvider	AP
CloseBusiness	V
DSPsInconvenient	R
NoContinuationOfCare	I
PatientExperience	M

Figure 17: Network analysis -- position of dissenters on DSP regime

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the dissenting community is the set of nodes {U, AP, V, R, I, M}, as reflected in panel 1 (fig.17). The orange edges/arcs are the ones having the highest weights (most affiliation of agreeing stakeholders) in figure 17 (panel 1).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 17):
  - **Node 'U' -- Consensus on 'B-BBEE could assist'.** The identified stakeholder groups connected to node 'U' are: i) Beneficiaries; ii) Other Healthcare Disciplines and iii) Pharmacies.
  - **Node 'AP' -- Consensus on 'Beneficiaries free to choose provider'.** The identified stakeholder groups connected to node 'AP' are: i) Beneficiaries; ii) Other Healthcare Disciplines, iii) Pharmacies, and iv) a Pharmaceutical Company.

- **Node 'V' -- Consensus on 'Close business',** meaning that providers face having to close businesses. The identified stakeholder groups connected to node 'V' are: i) Beneficiaries; ii) Other Healthcare Disciplines, and iii) Pharmacies.
- **Node 'R' -- Consensus on 'DSPs Inconvenient'**. The identified stakeholder groups connected to node 'R' are: i) Beneficiaries; ii) Other Healthcare Disciplines, and iii) Pharmacies.
- **Node 'I' -- Consensus on 'No continuation of care'**. The identified stakeholder groups connected to node 'I' are: i) Beneficiaries; ii) Other Healthcare Disciplines, and iii) Pharmacies.
- **Node 'M' -- Consensus on 'Patient experience'**(under other in the tassel diagram). The identified stakeholder groups connected to node 'M' are: i) Beneficiaries; ii) Other Healthcare Disciplines, and iii) Pharmacies.

ii) Cliques:

Set {U, AP, V, R, I, M} is a complete diagram, all nodes are connected to each other, which is stronger than a clique.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.5.2.2 Bi-modal network analysis: supporters' comments on rules of DSPs

Figure 18 shows a social network analysis visualization/diagram, on supporter stakeholder issues regarding rules of DSPs. Panel 1 (fig. 18), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram of the supporter community (stakeholders not in favour of the current implementation of DSPs). Panel 2 (fig. 18), shows the stakeholder interests of supporters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 18), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

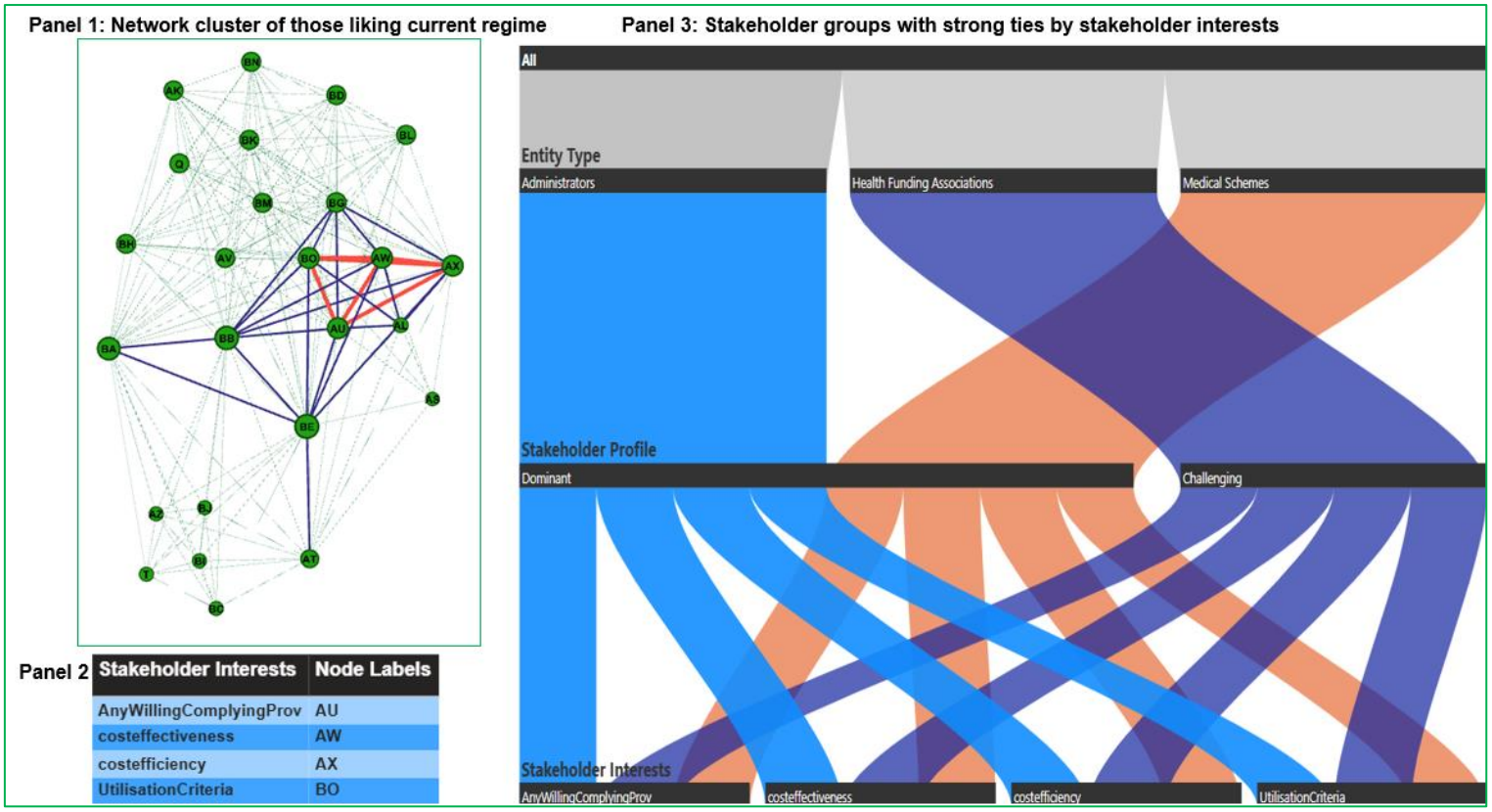


Figure 18: Network analysis -- position of supporters on DSP regime

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the supporting community is the set of nodes {AU, AW, AX, BO}, as reflected in panel 1 (fig.18). The orange edges/arcs are the ones having the highest weights (most affiliation of agreeing stakeholders) in figure 18 (panel 1).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 18):
    - **Node 'AU' -- Consensus on 'Any willing complying provider'**, can be participate in a DSP network**.** The identified stakeholder groups connected to node 'AU' are: i) Medical Schemes; ii) Administrators and iii) Health Funding Associations.

- **Node 'AW' -- Consensus on 'Cost effectiveness'**, meaning; DSP contracts stipulate that providers must demonstrate cost effectiveness**.** The identified stakeholder groups connected to node 'AW' are: i) Medical Schemes; ii) Administrators and iii) Health Funding Associations.
- **Node 'AX' -- Consensus on 'Cost efficiency',** meaning; DSP contracts stipulate that providers must demonstrate cost efficiency. The identified stakeholder groups connected to node 'AX' are: i) Medical Schemes; ii) Administrators and iii) Health Funding Associations.
- **Node 'BO' -- Consensus on 'Utilization criteria',** meaning; DSP contracts stipulate that providers must demonstrate that utilization is monitored. The identified stakeholder groups connected to node 'BO' are: i) Beneficiaries; ii) Other Healthcare Disciplines, and iii) Pharmacies.

ii) Cliques:

Set {AU, AW, AX, BO} is a complete diagram, all nodes are connected to each other, which is stronger than a clique.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.6 Stakeholder Issues regarding Economic Efficiency

3.6.1 Word cloud: economic efficiency of DSPs

Figure 19 reports the stakeholder interests related to the domain/policy issue of economic efficiency of DSP networks. Figure 19, panel 1, is a word cloud showing stakeholder interests of dissenters from the current DSPs as implemented. Panel 2 (fig. 19) is a word cloud showing stakeholder interests of those supporting the current DSPs as implemented.

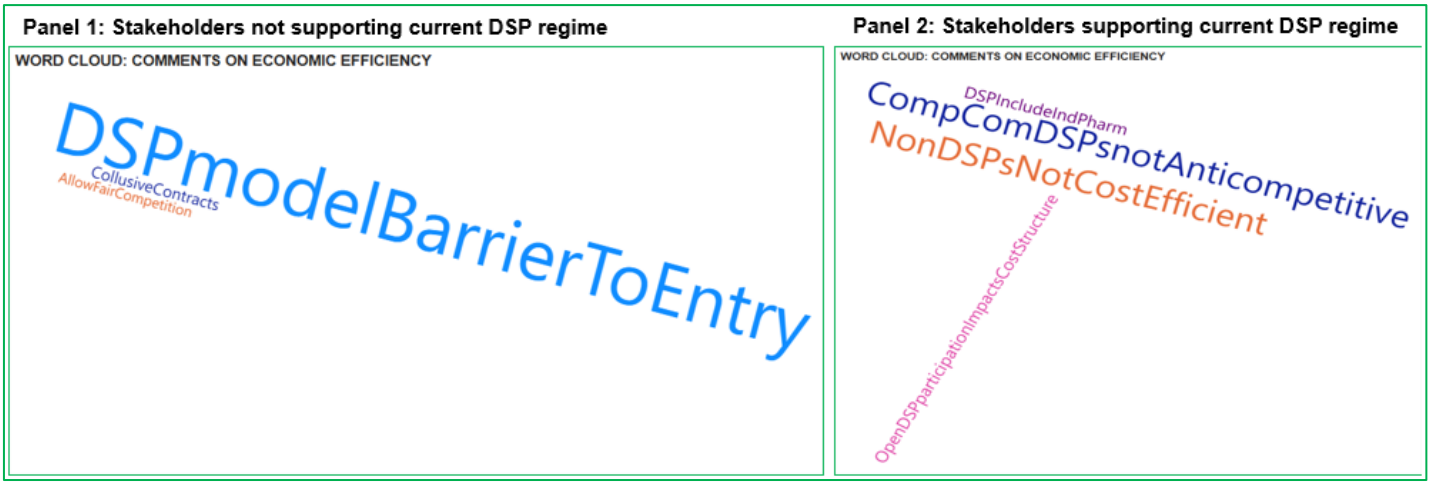


Figure 19: Word cloud - stakeholder comments on economic efficiency

Stakeholder interests of dissenters of current DSPs (panel 1, fig. 19)

The top three stakeholder interests were pertaining to the following concerns:

i) **'DSP model is a barrier to entry'** – DSP networks impede market entry by independent practices.

ii) **'Collusive contracts'** – DSP contracts/tenders are associated with collusive practices/relationships among market participants.

iii) **'Allow fair competition'** – DSP contracts/tenders do not allow for fair competition.

Stakeholder interests of supporters of current DSPs (panel 2, fig. 19)

The top three stakeholder interests were pertaining to the following points/concerns:

i) **'High patient volumes for DSP tariffs'** – the DSP model is based on lower reimbursement agreements for high patient volumes.

ii) **'Competition Commission DSP not anticompetitive'** – the Competition Commission says DSPs are not anticompetitive.

iii) **'NonDSPs not cost efficient'** – nonDSPs are not cost efficient.

3.6.2 Bi-model network analysis: economic efficiency

3.6.2.1 Bi-modal network analysis: dissenters' comments on economic efficiency of DSPs

Figure 20 shows a social network analysis visualization/diagram, on dissenting stakeholder issues regarding the economic efficiency of DSP networks. Panel 1 (fig. 20), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes and the supporter community has green nodes). Panel 2 (fig. 20), shows the stakeholder interests of dissenters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 20), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

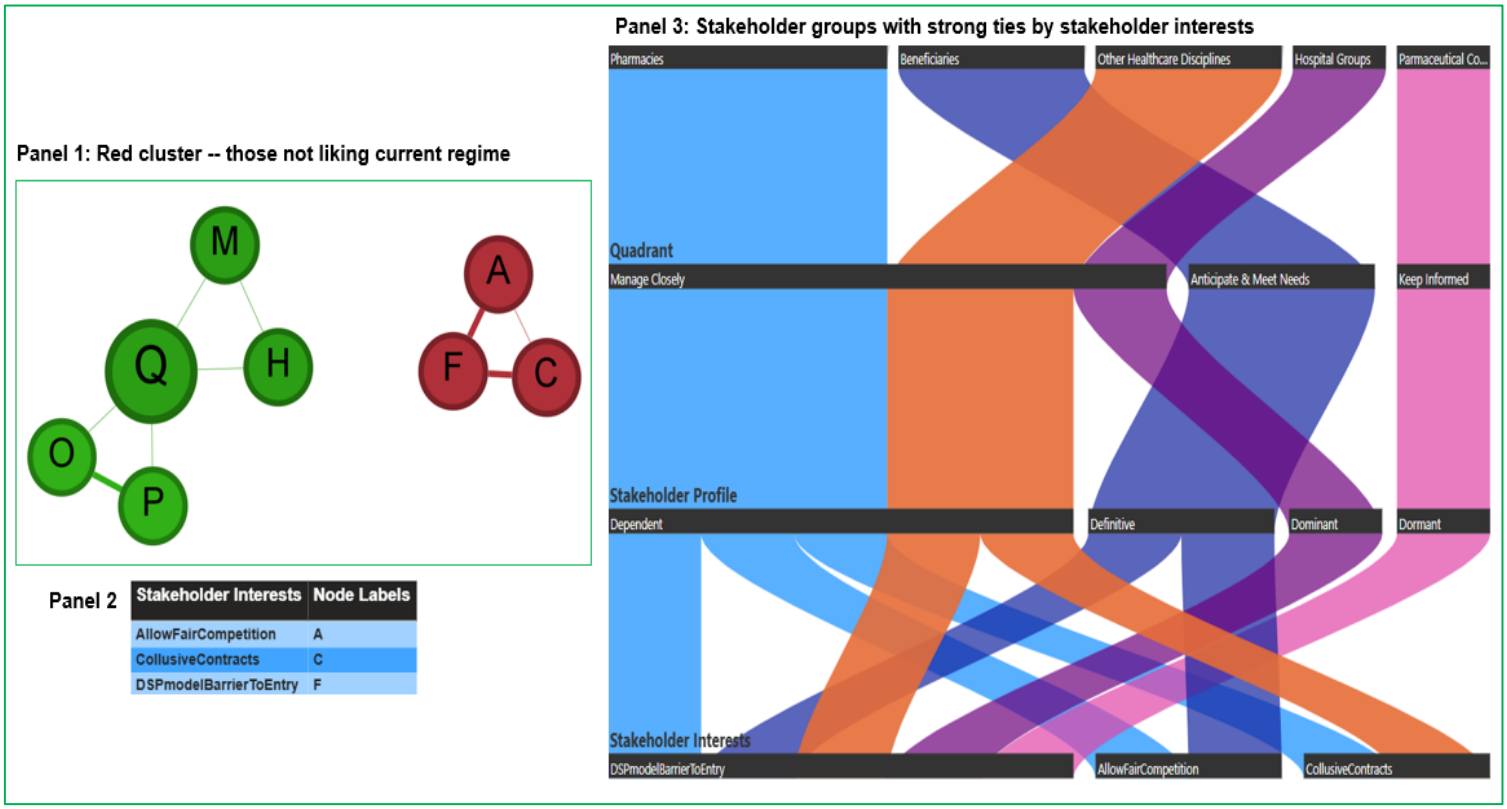


Figure 20: Network Analysis -- position of dissenters on economic efficiency

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the dissenting community is the set of nodes {A, F, C}, as reflected in panel 1 (fig.20).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)

- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 20):
    - **Node 'A' -- Consensus on 'Allow fair competition'.** The identified stakeholder groups connected to node 'A' are: i) Pharmacies; and ii) Beneficiaries.
    - **Node 'C' – Consensus on 'Collusive contracts'.** The identified stakeholder groups connected to node 'C' are: i) Pharmacies; and ii) Beneficiaries.
    - **Node 'F' -- Consensus on 'DSP model barrier to entry'.** The identified stakeholder groups connected to node 'F' are: i) Pharmacies; ii) Beneficiaries; iii) Other Healthcare Disciplines; iv) Hospital Groups; and v) a Pharmaceutical Company.

ii) <u>Cliques</u>:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups -- see panels 1 and 3 in fig. 20);
- **Set {A, C, F} forms a clique**:
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'A') -- 'Allow fair competition':
        - ✓ Pharmacies.
        - ✓ Beneficiaries.
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'C') -- 'Collusive contracts':
        - ✓ Pharmacies.
        - ✓ Other Healthcare Disciplines.
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'F') -- 'DSP model barrier to entry':
        - ✓ Pharmacies.
        - ✓ Beneficiaries.
        - ✓ Other Healthcare Disciplines.
        - ✓ Hospital Groups.
        - ✓ A Pharmaceutical Company.
- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the

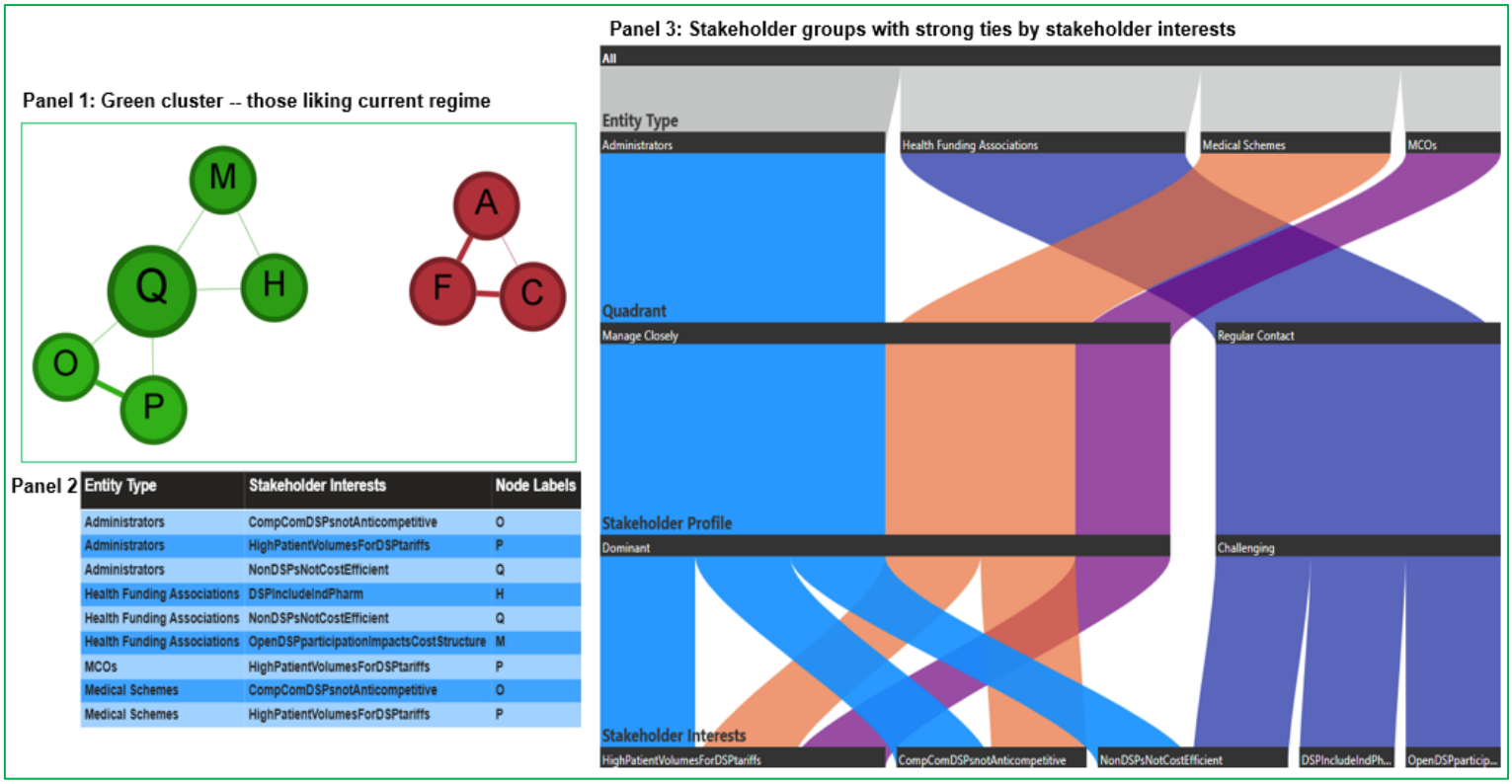
cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.6.2.2 Bi-modal network analysis: supporters' comments on the economic efficiency of DSPs

Figure 21 shows a social network analysis visualization/diagram, on supporting stakeholder issues regarding the economic efficiency of DSP networks. Panel 1 (fig. 21), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes, and the supporter community has green nodes). Panel 2 (fig. 21), shows the stakeholder interests of supporters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 21), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.



Entity Type	Stakeholder Interests	Node Labels
Administrators	CompComDSPsnotAnticompetitive	O
Administrators	HighPatientVolumesForDSPtariffs	P
Administrators	NonDSPsNotCostEfficient	Q
Health Funding Associations	DSPIncludeIndPharm	H
Health Funding Associations	NonDSPsNotCostEfficient	Q
Health Funding Associations	OpenDSPparticipationImpactsCostStructure	M
MCOs	HighPatientVolumesForDSPtariffs	P
Medical Schemes	CompComDSPsnotAnticompetitive	O
Medical Schemes	HighPatientVolumesForDSPtariffs	P

Figure 21: Network Analysis -- position of supporters on economic efficiency

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the supporting community is the set of nodes {O, P, Q}, as reflected in panel 1 (fig.21). The set of nodes {H, M} have edges that are linked to only type stakeholder interest groups (see panel 2, fig. 21}
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 21):
  - **Node 'O' -- Consensus on 'CompCom DSPs not anticompetitive'.** The identified stakeholder groups connected to node 'O' are: i) Administrators; and ii) Medical Schemes.
  - **Node 'P' -- Consensus on 'High patient volumes for DSP tariffs'.** The identified stakeholder groups connected to node 'P' are: i) Administrators; ii) Managed Care Organisations; and iii) Medical Schemes.
  - **Node 'Q' -- Consensus on 'Non-DSPs not cost efficient'.** The identified stakeholder groups connected to node 'Q' are: i) Administrators; and ii) Health Funding Associations.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups – see panels 1 and 3, figure 21);
- **Set {O, P, Q} forms a clique**:
  The affiliation of stakeholder groups to each node are similar to bullet point ii) above.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.7 Stakeholder Issues regarding Monitoring & Evaluation Criteria of DSPs

3.7.1 Word cloud: monitoring and evaluation of M&E criteria of DSPs

Figure 22 reports the stakeholder interests related to their perceptions on monitoring and evaluation (M&E) of DSP networks. Figure 22, panel 1, is a word cloud showing the stakeholder interests of dissenters from the current DSPs as implemented. Panel 2 (fig. 13) is a word cloud showing stakeholder interests of those supporting the current DSPs as implemented.

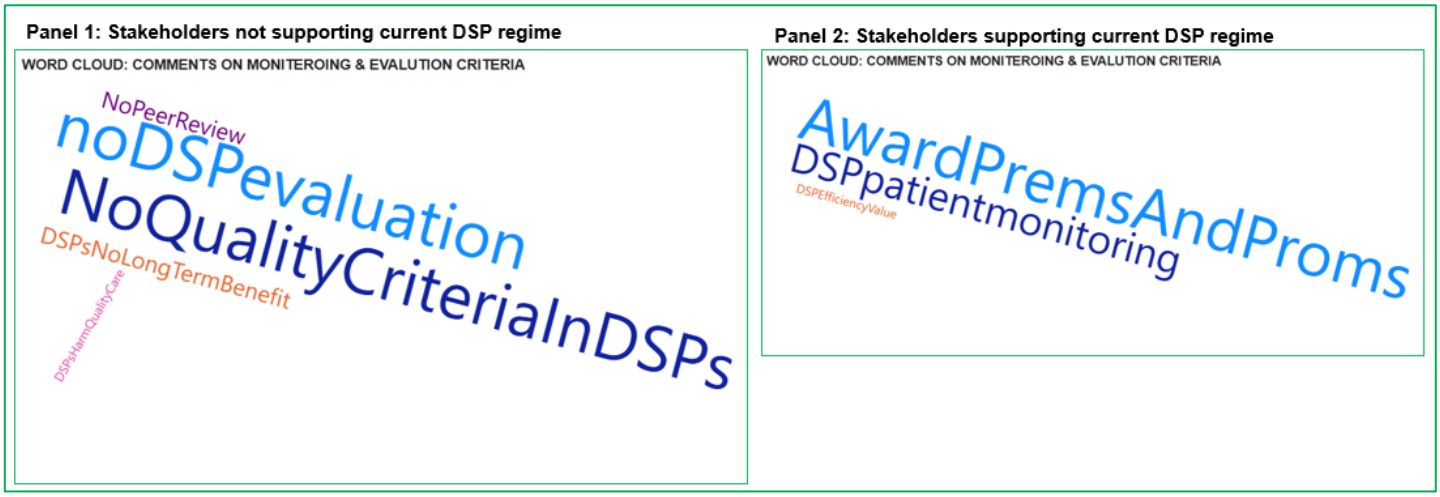


Figure 22 Word cloud -- Stakeholder interests on M&E in DSPs

Stakeholder interests of dissenters from current DSPs (panel 1, fig. 22)

The top three stakeholder interests were pertaining to the following concerns:

i) '**No DSP evaluation'** – there is no monitoring and evaluation of DSP networks;
ii) **'No quality criteria in DSPs'** – there are no metrics to measure DSP processes and outcomes; and
iii) **'DSP no long-term benefit'** – DSPs do not create a long-term benefit.

Stakeholder interests of supporters of current DSPs (panel 2, fig. 22)

The top three stakeholder interests were pertaining to the following points:

i) **'Award PREMS and PROMS'** – DSPs are awarded regarding patient experience and outcomes;
ii) **'DSP patient monitoring'** – DSP networks do monitor patients; and
iii) **'DSPs efficiency value'** – DSPs provide value through being efficient.

3.7.2 Bi-model network analysis: M&E criteria of DSPs

3.7.2.1 Bi-modal network analysis: dissenters' comments on M&E criteria of DSPs

Figure 23 shows a social network analysis visualization/diagram, on dissenting stakeholder issues regarding M&E in DSP networks. Panel 1 (fig. 23), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes and the supporter community has green nodes). Panel 2 (fig. 23), shows the stakeholder interests of dissenters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 23), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

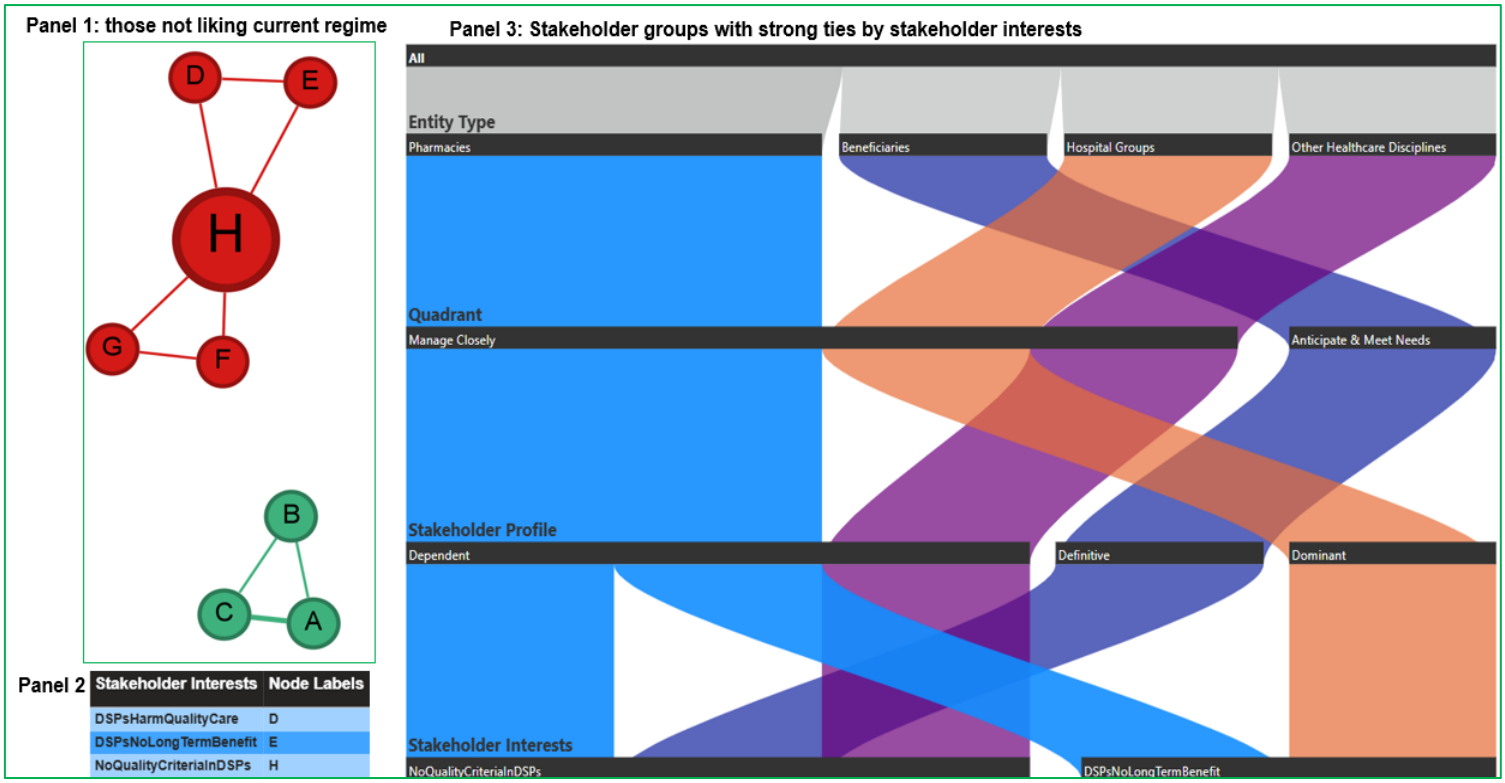


Figure 23: Network analysis -- position of dissenters on M&E criteria

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the dissenting community is the set of nodes {H}, as reflected in panel 1 (fig.23). Node 'H' has the highest centrality score in the dissenters community, hence; the size of the node relative to all other adjacent nodes (nodes that are directly connected to node 'H'), see panel 1, fig. 23.
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 15):
  - **Node 'E' -- Consensus on 'DSPs no long-term benefit'.** The identified stakeholder groups connected to node 'E' are: i) Pharmacies; and ii) Hospital Groups.
  - **Node 'H' -- Consensus on 'No quality criteria in DSPs'.** The identified stakeholder groups connected to node 'H' are: i) Pharmacies; ii) Other Healthcare Disciplines; and iii) Beneficiaries.

ii) Cliques (see panels 1 and 3, fig. 23)

- **Set {F, G, H}** is not a clique as only one type of stakeholder group is affiliated to the elements of stakeholder interests in the node set.
- **Set {D, E, H} forms a clique:**
    - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'D') -- 'DSPs harm quality care':
        - ✓ Pharmacies.
    - Stakeholders' connectivity (affiliation) to node 'E' -- 'DSPs provide no long-term benefit':
        - ✓ Pharmacies.
        - ✓ Hospital Groups.
    - Stakeholders' connectivity (affiliation) to node 'H' -- 'No quality criteria in DSPs':
        - ✓ Other Healthcare Disciplines.
        - ✓ Beneficiaries.
        - ✓ Pharmacies.
- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.7.2.2 Bi-modal network analysis: supporters' comments on M&E criteria of DSPs

Figure 24 shows a social network analysis visualization/diagram, on supporting stakeholder interests regarding M&E criteria of DSPs. Panel 1 (fig. 24), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes, and the supporter community has green nodes). Panel 2 (fig. 24), shows the stakeholder interests of supporters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 14), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

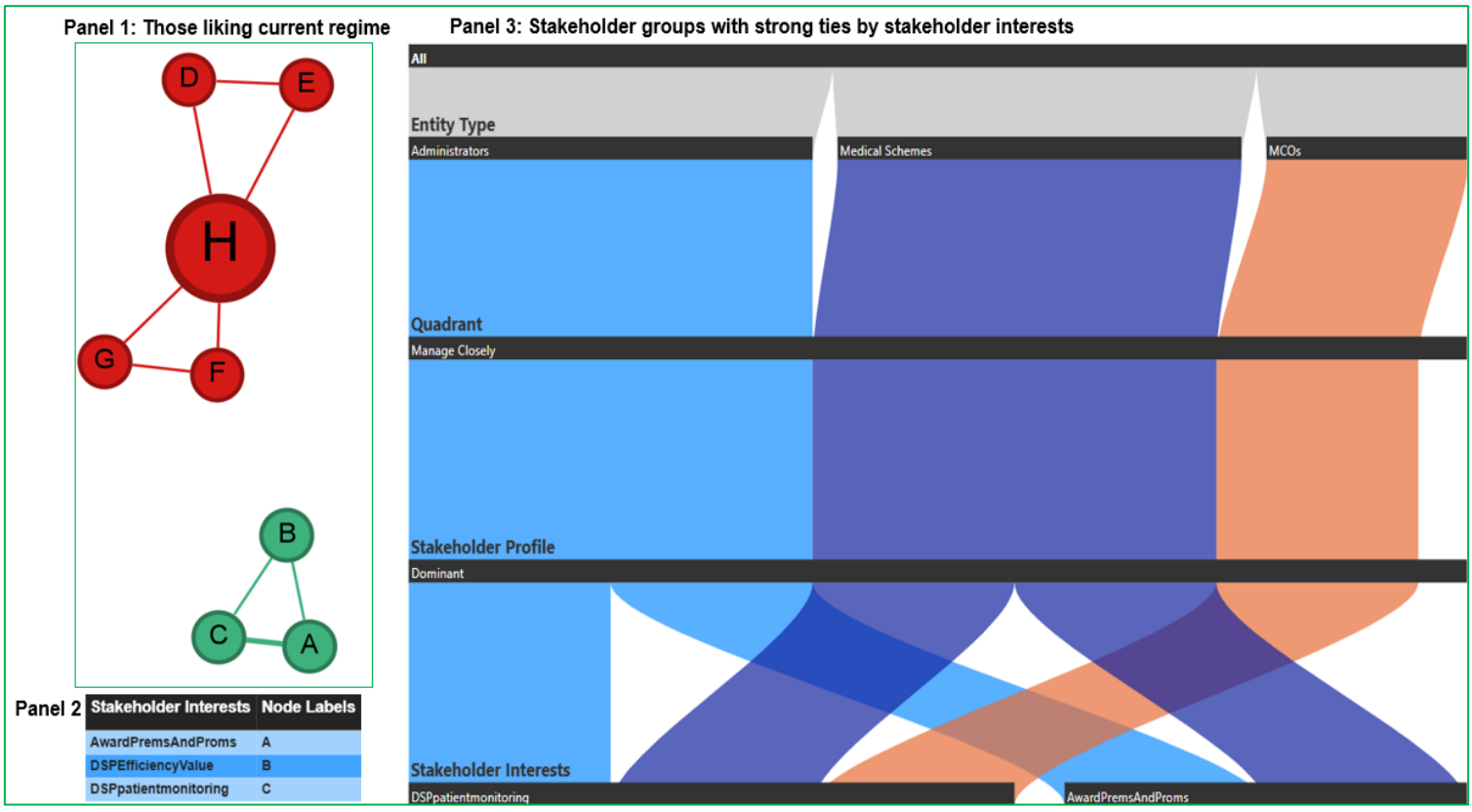


Figure 24: Network analysis -- position of supporters on M&E criteria

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the supporting community is the set of nodes {C, A}, as reflected in panel 1 (fig. 24).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 24):
  - **Node 'A' -- Consensus on 'Award PREMs and PROMs'.** The identified stakeholder groups connected to node 'A' are: i) Administrators; and ii) Medical Schemes.
  - **Node 'C' -- Consensus on 'DSPs monitor their patients'.** The identified stakeholder groups connected to node 'C' are: i) Administrators; ii) Medical Schemes; and iii) Managed Care Organizations.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups);
- **Set {A, B, C} forms a clique**:
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'A') -- 'Award PREMs and PROMs', meaning that patient experience and outcomes are awarded:
    - ✓ Administrators.
    - ✓ Medical Schemes.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'B') -- 'DSP efficiency is value':
    - ✓ Administrators.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'C') -- 'DSPs monitor their patients':
    - ✓ Administrators.
    - ✓ Managed Care Organizations.
    - ✓ Medical Schemes.
- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.8 Stakeholder Issues regarding the Design of DSPs

3.8.1 Word cloud: stakeholder comments on the design of DSPs

Figure 25 reports the stakeholder interests related to the design of DSP networks. Figure 25, panel 1, is a word cloud showing stakeholder interests of dissenters from the current DSPs as implemented. Panel 2 (fig. 13) is a word cloud showing stakeholder interests of those supporting the current DSPs as implemented.

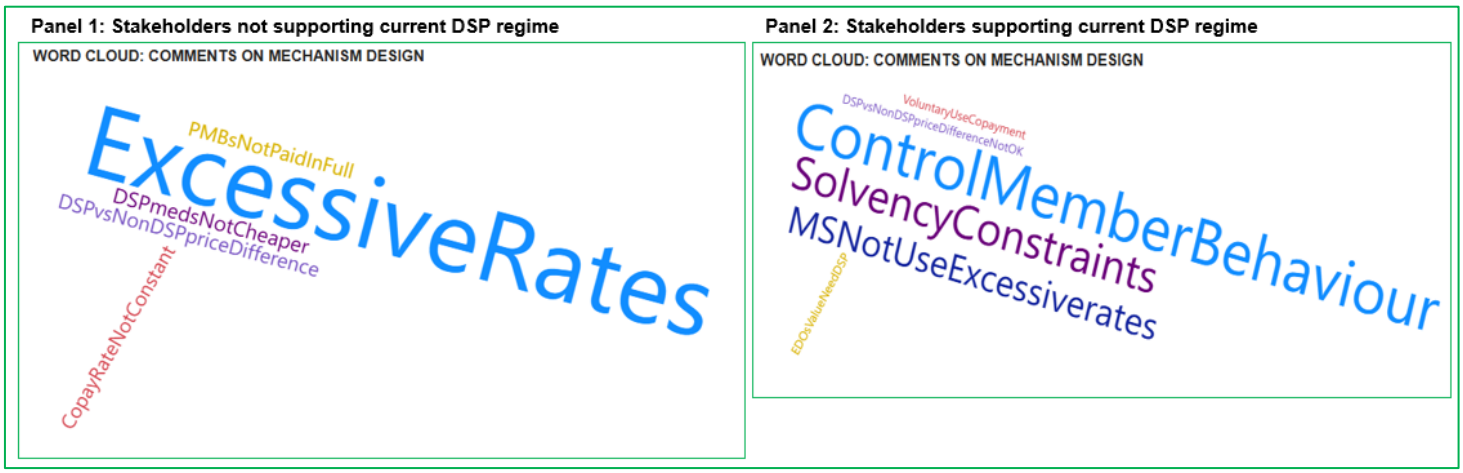


Figure 25: Word cloud -- stakeholder comments on the design of DSPs

Stakeholder interests of dissenters of current DSPs (panel 1, fig. 25)

The top three stakeholder interests were pertaining to the following concerns:

i) **'Excessive rates'** – meaning, copayments are unaffordable.

ii) **'DSP medication is not cheaper'** – meaning, provider networks do not provide cheaper medication; and

iii) **'DSPs vs. nonDSP price difference'** – meaning, copayments should be the difference between the DSP and nonDSP price.

Stakeholder interests of supporters of current DSPs (panel 2, fig. 25)

The top three stakeholder interests were pertaining to the following points:

i) **'Control member behaviour'** – Copayments for going out of network are there to penalise people for not seeking services within the DSP network;

ii) **'Solvency constraints'** – meaning, if beneficiaries seek health services outside of the DSP network, it will result in solvency problems for the medical scheme will; and

iii) **'Medical schemes do not use excessive rates'** – meaning, medical scheme DSP networks do not charge excessive rates.

3.8.2 Bi-model network analysis: design of DSP networks

3.8.2.1 Bi-modal network analysis: dissenters' comments on design of DSPs

Figure 26 shows a social network analysis visualization/diagram, on dissenting stakeholder interests regarding the design of DSPs. Panel 1 (fig. 26), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes, and the supporter community has green nodes). Panel 2 (fig. 26), shows the stakeholder interests of dissenters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 26), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

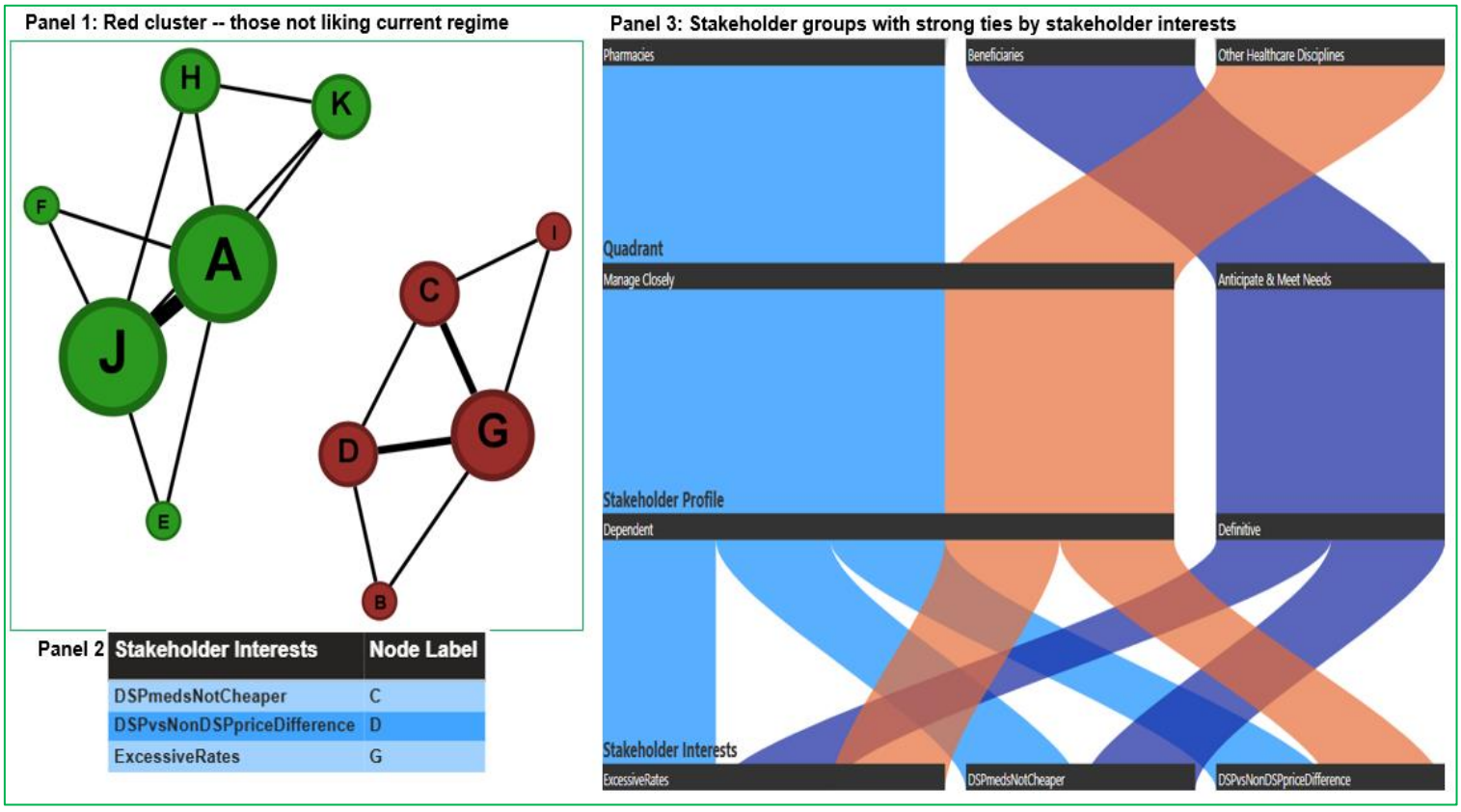


Figure 26: Network analysis – position of dissenters on the design of DSPs

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the dissenting community is the set of nodes {C, D, G}, as reflected in panel 1 (fig.26).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 26):
  - **Node 'C' -- Consensus on 'DSP medications are not cheaper'.** The identified stakeholder groups connected to node 'C' are: i) Pharmacies; and ii) Beneficiaries.
  - **Node 'D' -- Consensus on 'DSP vs. nonDSP price difference'.** The identified stakeholder groups connected to node 'D' are: i) Other Healthcare Disciplines; and ii) Pharmacies.
  - **Node 'G' -- Consensus on 'Excessive rates'.** The identified stakeholder groups connected to node 'G' are: i) Pharmacies; ii) Other Healthcare Disciplines; and iii) Beneficiaries.

ii) Cliques (see panel, fig. 26):

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups).
- There are three cliques in the dissenting community, we will focus on the most central below.
- **Set {C, D, G} forms a clique**:
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'C') -- 'DSP medications are not cheaper':
    - ✓ Pharmacies.
    - ✓ Beneficiaries.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'D') -- 'DSP vs. nonDSP price difference':
    - ✓ Pharmacies.
    - ✓ Other Healthcare Disciplines.
  - Stakeholders' connectivity (affiliation) to stakeholder interest (node 'G') -- 'Excessive rates':
    - ✓ Pharmacies.
    - ✓ Other Healthcare Disciplines

- ✓ Beneficiaries.

- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

3.8.2.2 Bi-modal network analysis: supporters' comments on design of DSPs

Figure 27 shows a social network analysis visualization/diagram, on supporting stakeholder interests regarding access to DSPs. Panel 1 (fig. 27), shows a bi-modal (see analysis section under methodology) network analysis visualization/diagram with two communities (dissenter community has red nodes, and the supporter community has green nodes). Panel 2 (fig. 27), shows the stakeholder interests of supporters, and node labels of the relevant stakeholder interests in the network analysis visualization/diagram. Panel 3 (fig. 27), shows a tassel diagram identifying stakeholder interests co-occurring with strong ties/potential alliances between stakeholder entities/groups.

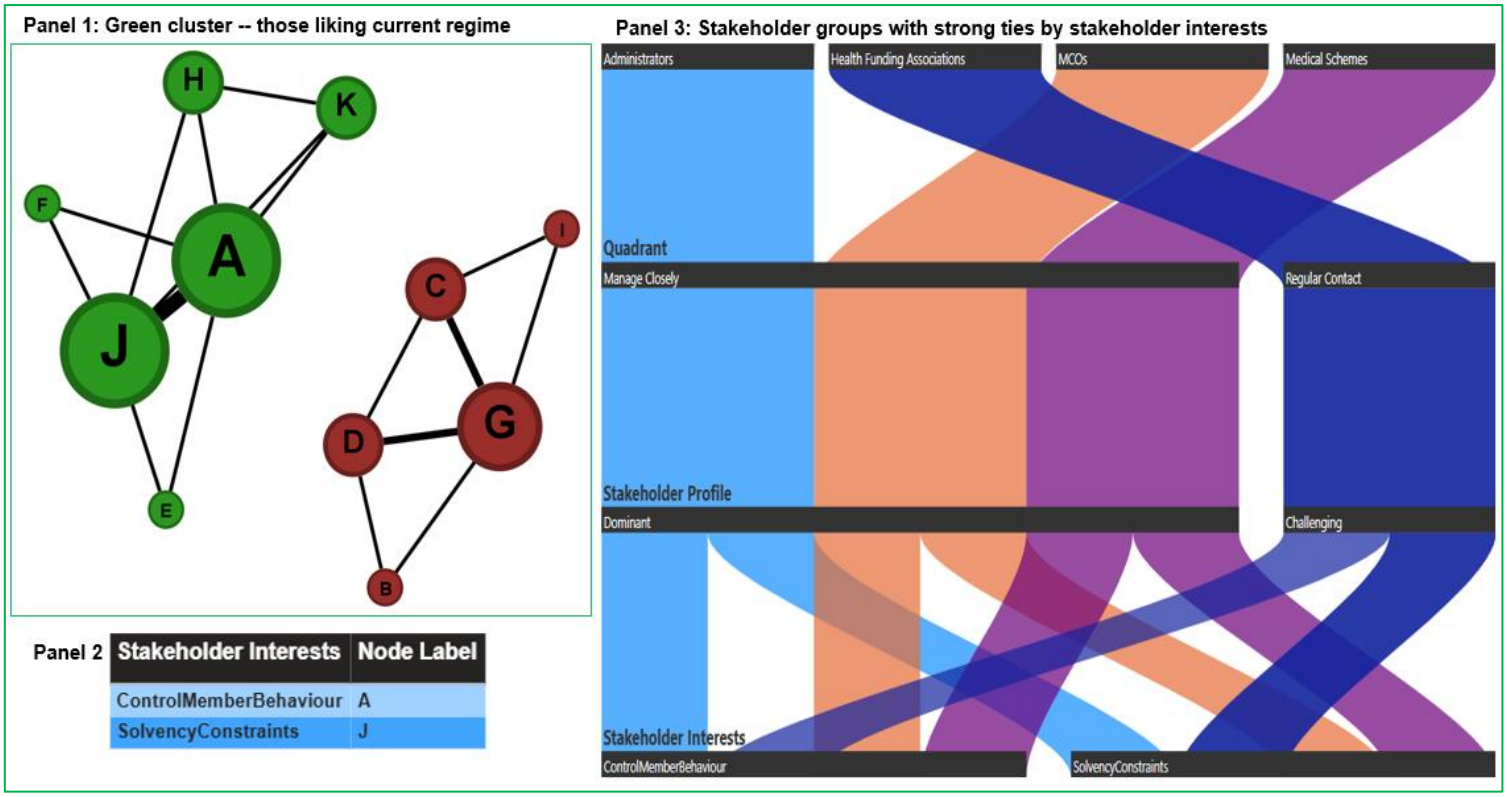


Figure 27: Network analysis – position of supporters on the design of DSPs

i) Connection and positioning of nodes:

- The nodes that are at a central position in the network analysis visualization for the supporting community is the set of nodes {A, J}, as reflected in panel 1 (fig.27).
- The closeness positioning of these specific nodes symbolizes similarity related the stakeholder interests of affiliated entities (stakeholder entities affiliated to a common stakeholder interest)
- The links (arcs/edges) to the nodes (vertices) are thickest (weights) for nodes with stronger relationship, meaning there is more agreement among stakeholders pertaining to a specific stakeholder interest.
- The patterns of strong connections can be seen in the tassel graph in panel 3 (fig. 27):
  - **Node 'A' -- Consensus on 'Control member behaviour'.** The identified stakeholder groups connected to node 'A' are: i) Administrators; ii) Medical Schemes; iii) Managed Care Organizations; and iv) 'Health Funding Associations'.
  - **Node 'J' -- Consensus on 'Solvency constraints'.** The identified stakeholder groups connected to node 'J' are: i) Administrators; ii) Medical Schemes; iii) Managed Care Organizations; and iv) 'Health Funding Associations'.

ii) Cliques:

- A clique is when all nodes are connected to each other, we report the nodes that have high consensus (stakeholder interests with high consensus among stakeholder entities/groups);
- There are many cliques in figure 27, panel 1. This indicates high embeddedness within sub-communities, but this is neutralized by neighbourhood intersections ('regular equivalence).
- The significance of cliques is that stakeholder interests are very entrenched and embedded among cliques, which make it difficult to break an impasse. In this case, there are weak ties connecting the cliques to other positions regarding stakeholder interests. So, its not as though opinions cannot change.

iii) Neighbourhood intersections:

- Neighbourhood intersections are present
- The significance of neighbourhood intersections are that bonds among nodes that do not connect are possible. Meaning that an intervention can be as far reaching as to resolve many concerns related to stakeholder interests.

4. PRELIMINARY RECOMMENDATIONS

At this point we would like to discuss our preliminary recommendations, as a result of doing a thorough analysis of stakeholder submissions. We will present our menu of interventions, and elaborate on their implementability in the following section. Stakeholders will need to be engaged on the decision variables related to each proposed intervention in the menu of interventions. Such that a social choice rule emerges, resulting in a collective decision by affected stakeholders. This collective agreement will then serve as guidelines on DSPs, that will have to be monitored and enforced, on agreement under the auspices of the CMS, or Supply-Side Regulator as recommended by the Health Market Inquiry (HMI Report, 2019 ; p. 226).

This section will proceed as follows: i) an introduction to our proposed menu of interventions; and iii) a synthesis of stakeholder interests, identified interventions to be included in the choice menu for the proposed guidelines, and validate the recommendation with established regulatory competition framework (which is source not developed by the CMS).

4.1 Menu of Interventions

Figure 28 is a force field analysis. The figure reports a menu of possible interventions for implementing.

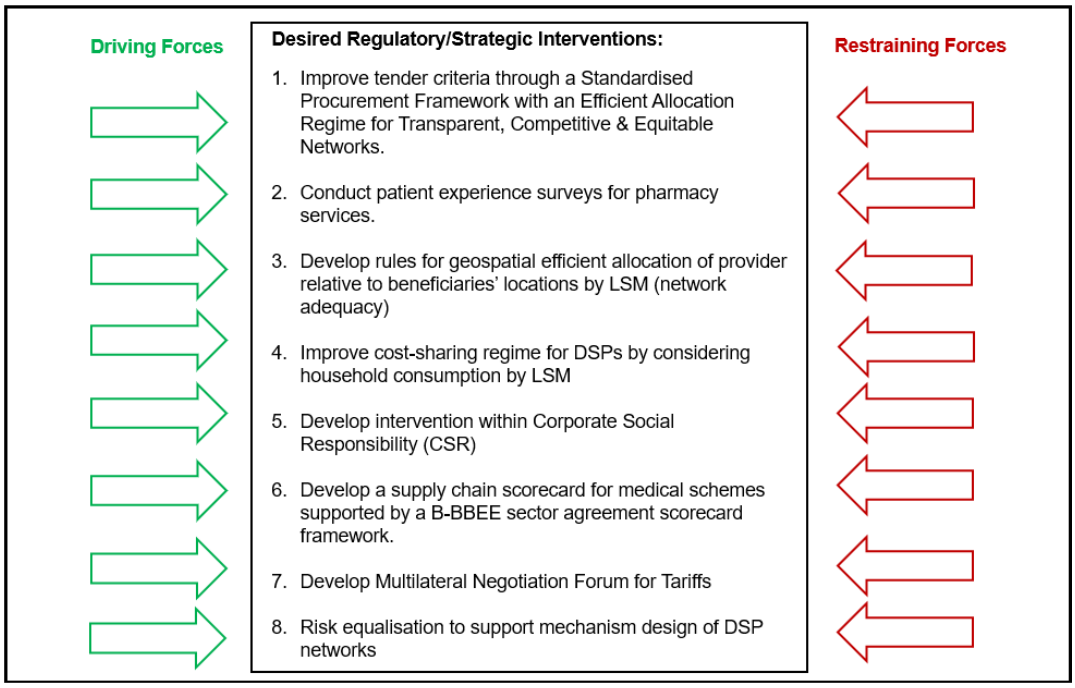


Figure 28: Field force analysis – menu of proposed interventions

4.2 Proposal for Implementation

The tables below provide a detailed breakdown of how the menu of proposed interventions may help sustain DSP networks, while providing a rules-based order that incentivizes while producing social optima. The tables are self explanatory.

Table 1: Preliminary recommendations on responses to UDBP Declaration

Stakeholder Issue	Stakeholder Interest	Stakeholder Position	Pre-condition for Regulated Competition	Regulatory Economics Principles	Preliminary Recommendations
CMS to Provide Policy Guideline	Any Willing & Complying Provider (does not exist)	Opposed to status quo	Market contestability; Freedom to contract & integrate	Access; Allocative efficiency; Market contestability	Mandatory standards for contracts; Mandatory tender processes
CMS to Provide Policy Guideline	DSPs not implemented correctly	Opposed to status quo	Effective quality supervision	Technical efficiency	Patient experience surveys; Mandatory treatment guidelines
Reimbursement Rates	Equal for non-DSPs and DSPs	Opposed to status quo	Effective competition regulation	Allocative efficiency	Multilateral negotiation forum
Role of Community Pharmacies	Important role for patient experience	Opposed to status quo	Effective quality supervision	Technical efficiency	Multilateral negotiation forum; Mandatory standards for contracts
Transparency	No network criteria	Opposed to status quo	Market transparency	Allocative efficiency	Mandatory market information for providers and consumers
CMS to Provide Policy Guideline	Any willing & capable provider criteria exist	Keep status quo	Freedom to contract	Access; Allocative efficiency; Market contestability	Stakeholder engagement
Copayment Regulation	Regulation 8 allows demand management	Keep status quo	Transparency and certainty	Stability through certainty	Guidelines; Industry engagement
Promotion of Access to Information Act	PAJA-based review of DSP regime	Keep status quo	Transparency and certainty	Stability through certainty	Guidelines; Industry engagement
Promotion of Access to Information Act	Section 61 abuse of power	Keep status quo	Transparency and certainty	Stability through certainty	Guidelines; Industry engagement
CMS to Provide Policy Guideline	No specific parameters for DSP networks	Keep status quo	Transparency and certainty	Stability through certainty	Guidelines; Industry engagement

Table 2: Preliminary recommendations on responses related to access to DSPs

Stakeholder Issue	Stakeholder Interest	Stakeholder Position	Pre-condition for Regulated Competition	Regulatory Economics Principles	Preliminary Recommendations
Accessibility	Distance covered is too far	Not in support	Guaranteed access to basic care	Affordability	Certification of DSP networks for passing network adequacy test
Accessibility	Travelling costs increase medication costs	Not in support	Guaranteed access to basic care	Affordability	Certification of DSP networks for passing network adequacy test
Accessibility	No access to DSPs in Townships	Not in support	Guaranteed access to basic care	Affordability	Certification of DSP networks for passing network adequacy test
Location Allocation	Better geographic distribution of DSPs	Not in support	Guaranteed access to basic care	Affordability	Certification of DSP networks for passing network adequacy test
Location Allocation	Subnational contracting level is inappropriate	Support	1. Risk bearing buyers and sellers 2. Market participants must be price sensitive	1. Technical Efficiency 2. Allocative Efficiency	Certification of DSP networks for passing network adequacy test
Location Allocation	Tenders will increase overhead costs	Support	1. Risk bearing buyers and sellers 2. Market participants must be price sensitive	1. Technical Efficiency 2. Allocative Efficiency	Certification of DSP networks for passing network adequacy test

Table 3: Preliminary recommendations on responses related to economic efficiency

Stakeholder Issue	Stakeholder Interest	Stakeholder Position	Pre-conditions for Regulated Competition	Regulatory Economics Principles	Preliminary Recommendations
This is monopolistic competition	Allow for fair competition	Not in support	There should be market contestability	Allocative efficiency; Technical efficiency	Standard guidelines for DSP contracts or tender processes; Certification of network adequacy
This is monopolistic competition	There are collusive contracts	Not in support	There should be market contestability	Allocative efficiency; Technical efficiency	Standard guidelines for DSP contracts or tender processes
This is monopolistic competition	DSP model is a barrier to competition	Not in support	There should be market contestability	Allocative efficiency; Technical efficiency	Standard guidelines for DSP contracts or tender processes; Certification of network adequacy
This is no monopolistic competition	CompCom says DSPs aren't anticompetitive	In support	There is an effective competition regime	Allocative efficiency; Technical efficiency	Standard guidelines for DSP contracts or tender processes; Certification of network adequacy
This is no monopolistic competition	High patient volumes for DSP tariffs	In support	Risk-bearing buyers and sellers	Allocative efficiency; Technical efficiency	Certification of network adequacy
This is no monopolistic competition	Non-DSPs are not cost efficient	In support	Freedom to contract	Technical efficiency	Patient experience surveys

Table 4: Preliminary recommendations on responses related to rules of DSPs

Stakeholder Issue	Stakeholder Interest	Stakeholder Position	Pre-conditions for Regulated Competition	Regulatory Economics Principles	Preliminary Recommendations
Acceptability	No continuation of care	Do not support status quo	Effective quality supervision; Consumer information and market transparency	Technical efficiency; Allocative efficiency	Patient experience surveys; Certification of network adequacy
Acceptability	Patient experience	Do not support status quo	Effective quality supervision; Consumer information and market transparency	Technical efficiency; Allocative efficiency	Patient experience surveys; Disease guidelines that are accessible
Accommodation	DSPs are inconvenient	Do not support status quo	Consumer information and market transparency; Risk-bearing buyers and sellers	Allocative efficiency	Certification of network adequacy; Understandable benefit-option rules
Availability	B-BBEE good	Do not support status quo	Contestable market; Risk-bearing buyers and sellers	Technical efficiency; Allocative efficiency; Access to DSPs	Transformation to be a constraint in geospatial optimisation model; B-BBEE scorecard
Free Choice	Beneficiaries are free to choose	Do not support status quo	Consumer choice; Cross-subsidisation without free-riding	Affordability	Certification of network adequacy; Understandable benefit-option rules
Specs of Contract	Any willing and able provider is a criteria	Support status quo	Freedom to contract; Risk-bearing buyers and consumers	Technical efficiency; Allocative efficiency	Certification of network adequacy
Specs of Contract	Cost efficiency is a criteria	Support status quo	Risk-bearing buyers and sellers	Technical efficiency	Patient experience surveys
Specs of Contract	Cost effectiveness is a criteria	Support status quo	Risk-bearing buyers and sellers; Monitor quality of care	Technical efficiency	Patient experience surveys
Specs of Contract	Utilisation monitoring is a criteria	Support status quo	Risk-bearing buyers and sellers	Technical efficiency	Patient experience surveys

Table 5: Preliminary recommendations on responses related to M&E criteria

Stakeholder Issue	Stakeholder Interest	Stakeholder Position	Pre-conditions for Regulated Competition	Regulatory Economics Principles	Preliminary Recommendations
Realised Access	There are no quality criteria in DSPs	Not support	Quality of care monitoring	Technical efficiency	Patient experience surveys
Quality Criteria	There is patient monitoring in DSPs	Support	Quality of care monitoring	Technical efficiency	Patient experience surveys
Realised Access	The value of DSPs is efficiency	Support	Risk-bearing buyers and sellers	Technical efficiency	Patient experience surveys

Table 6: Preliminary recommendations on responses related to the design of DSPs

Stakeholder Issue	Stakeholder Interest	Stakeholder Position	Pre-conditions for Regulated Competition	Regulatory Economics Principles	Preliminary Recommendations
Affordability	DSP medicines are not cheaper	Not support	Risk-bearing consumers and sellers; Cross-subsidization without free-riding	Allocative efficiency	Nature of the merit good (specificity)
Affordability	Copayment should be the difference between DSP and non-DSP price	Not support	Risk-bearing consumers and sellers; Cross-subsidization without free-riding	Allocative efficiency	Nature of the merit good (specificity)
Affordability	Excessively high copayments	Not support	Risk-bearing consumers and sellers; Cross-subsidization without free-riding	Allocative efficiency	Nature of the merit good (specificity)
Group Sustainability	Control members' health-seeking behaviour	Support	Risk-bearing consumers and sellers; Cross-subsidization without free-riding	Allocative efficiency	Nature of the merit good (specificity)
Group Sustainability	Solvency constraints	Support	Risk-bearing consumers and sellers; Cross-subsidization without free-riding	Allocative efficiency	Nature of the merit good (specificity)

5. PROPOSED WAY FORWARD

Figure 29 proposes a way forward for stakeholder engagement.

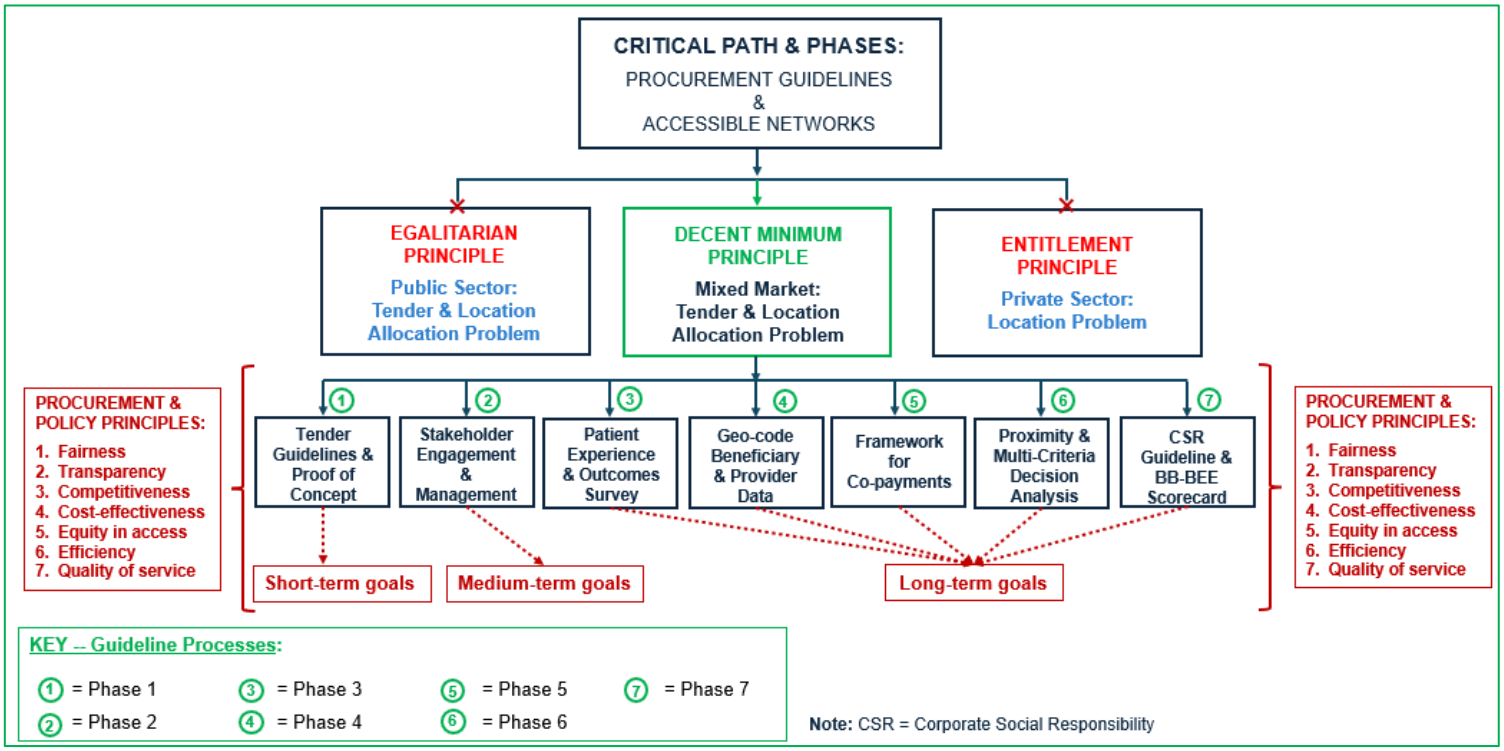


Figure 29: Proposed way forward

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7. APPENDICES

7.1 Appendix 2: Preliminary Guidelines on DSPs

1 Alignment with the General Procurement Guidelines

Introduce Tender Principles that adhere to a National Treasury's "General Procurement Guidelines" and "Principles of Health Purchasing Function."

1.1 Pillars of Procurement from General Guidelines

1.1.1 Fairness:

Ethics and Fair Dealing -- to conduct the business of procurement in a fair and ethical manner that encourages mutual trust and demonstrates bona fide intent.

1.1.2 Equity:

Transformation and BBBEE even from a regional or geographic location perspective. To attain equity in access, site suitability conditions should be a condition in the draft contract at the Expression of Interest (EOI) phase.

1.1.3 Transparency:

Accountability & Reporting -- To be accountable through transparent reporting of procurement activities and monitoring of implementation plans and outcomes. Thus, utilization reviews on the performance of successful bidders:

1.1.3.1 should be routine and not at termination,

1.1.3.2 the frequency should be covered in the Expression of Interest, and draft contract; and

1.1.3.3 this information should be available to beneficiaries to demonstrate accountability.

1.1.4 Competitiveness:

1.1.4.1 Open and effective competition:

The process must be honest and sincere; candidates should have access to:

i) procurement rules and practices,

ii) schedules of Evaluation Criteria, and

iii) virtual or physical data rooms (e.g., historic data or utilization trends, to have a competitive bid among candidates).

1.1.4.2 The number of final or short-listed bidders should allow for de facto competition, while not comprising on acquiring quality bidders, such that quality bidders do not apply for bid due to the risk of not recouping bid costs for large and complex bids.

1.1.5 Cost-effectiveness

1.1.5.1 Value for Money:

Value for money means cost-effectiveness is achieved through attaining a long-term benefit that is accrued over the life of the contract, rather than, mere cost minimization.

1.1.5.2 Monitoring and evaluation:

Monitoring of efficacy of managed care programmes – Pharmacy Benefits Management and medicine utilisation and dispensing costs – need to be conditions in the draft contract appended to the RFQ and RFP.

1.1.5.3 Fairness in meeting administrative sunk costs:

Bidders that are small operators need to be assisted in the negotiation phase of RFP to form consortiums or partnerships to comply with the systems and reporting requirements of medical schemes.

2 Alignment with the Principles of Health Purchasing Function

The tender procurement process should also be aligned to the principles of the health purchasing functions to ensure quality and equitable care that creates value for medical scheme beneficiaries.

2.1 Efficiency

2.1.1 Economic Use of Resources

2.1.1.1 Medical schemes give volume for savings in procurement costs to manage capital adequacy constraints in funding PMB medication.

2.1.1.2 The negotiation process should find ways for Independent Pharmacies to participate in partnerships, especially in underserved geographic areas/markets.

.2.1.1.3 Condition for contract performance should be adherence to scheme active purchasing mechanisms and incentives to control utilisation costs. A Multi-lateral Bargaining Negotiation Forum will assist small bidders to be able to compete in tender bids or RFPs.

2.2 Quality of Service

2.2.1 Improvement in the health status of covered risk groups

2.2.1.1 Patient Experience Surveys will help increase responsiveness to beneficiary needs, and the role of Independent Community Pharmacists in different markets

2.2.1.2 The results Patient-Reported surveys should inform evaluation criteria and develop evaluation schedules for future tenders

2.2.1.3 The Patient-Reported Experience surveys should be used as conditions of performance in the draft contract.

2.3 Equity in Access

2.3.1 Enable Progressive Market Access:

2.3.1.1 Due to market structure differences in different geographic areas, it is necessary that the availability of Pharmacies does not create pharmacy deserts, so site suitability analyses are required, and a clause should be included in tender contracts.

2.3.1.2 Inequality in accessing the markets for trade should be mitigated by encouraging B-BBEE partners in the tender negotiation process.

2.3.1.3 The supply chain of medical schemes for pharmacy services, will need to comply with a B-BBEE scorecard for access to the markets.

2.3.1.4 The access to market scorecard will be used to assess medical schemes' compliance with the corporate social responsibility framework to be developed by the CMS in collaboration with relevant partners.

3 Procurement Approach

3.1 Two-stage Approach

A two-stage approach will be used for the procurement of managed care/DSPs for pharmacies.

3.2 The Pre-Qualification Phase

3.2.1 There will be a call for Expression of Interest (EOI), known as the prequalification phase.

3.2.2 The prequalification phase will be used to shortlist successful bidders for the Request for Proposal (RFP).

3.2.3 This split process lends itself to transparency and fairness in increasing small bidders' competitiveness and reducing complaints by prospective losing bidders.

3.3 The Request for Proposal Phase

3.3.1 There will be a separate Request for Proposal (RFP) which closes after the EOI submissions.

3.3.2 The RFP phase will have interactions, and negotiations which will be governed by strict communication protocols

3.3.3 This approach allows for adjusting bids to suit the complexity of large projects and allows time for forming partnerships to cover sunk costs of investing in large projects.

3.3.4 This approach is more amenable for processes that seek to increase the capacity of new market entrants for market transformation.

4 Elaboration of Procurement Guidelines

4.1 Introduce fairness, equity, and transparency in Tender Processes by:

4.1.1 Specifying in the draft tender contract in the EOI & RFP phases:

4.1.1.1 Site suitability and network standards for identifying suitable pharmacy candidates in medical schemes' DSP networks – at a sub-place level for areas where medical schemes have market penetration.

4.1.1.2 Using detailed schedules for Evaluation Criteria:

4.1.1.2.1 Specify the criteria related to measuring the utilisation efficiency of candidate providers – to reduce the "opaqueness" in tender criteria

4.1.1.2.2 Communicate how successful RFP bidders can access the data room

4.1.1.2.3 The draft contract should mention the frequency of monitoring and cost-effectiveness consultations will be held with the successful tender participant, to reduce surprises when tenders are cancelled.

4.2 Improve competitiveness and market access by:

4.2.1 Reducing information asymmetry, through

4.2.2 Providing accessible information, and

4.2.3 Increase competitiveness by updating, publishing, and reporting a current list of providers on medical scheme DSP networks, i.e., who is in and who is out.

4.5 Co-payments

4.5.1 Charging of co-payments

4.5.1.1 The charging of co-payments needs to be fair and equitable and balance the following objectives:

4.5.1.1.1 To enhance fair access and affordable access to medicines by beneficiaries and demonstrate quality through efficient allocation of health providers to reduce the out-of-pocket costs of accessing pharmacies.

4.5.1.1.2 To keep medical schemes' capital adequacy intact while providing access to PMB services at cost.

4.5.1.1.3 Educating beneficiaries who use DSPs, the impact of going out of network for their benefit options' sustainability. Co-payments are a mechanism design framework in the scheme rules to drive beneficiary behaviour.

4.5.2 The criteria for justifying charging co-payments should include:

4.5.2.1 Medical schemes should demonstrate the appropriateness of co-payments by establishing fair thresholds for household out-of-pocket healthcare expenditure shares.

4.5.2.2 Out-of-pocket healthcare expenditure shares should demonstrate appropriateness by Living Standard Measures (LSMs). The regime for DSPs by considering household healthcare out-of-pocket consumption shares by LSM.

4.5.2.3 Develop Multilateral Negotiation Forum for Tariffs in collaboration with the Competition Commission, Medicine Pricing Committee, and the South African Health Products Regulatory Authority. This will:

i) increase market access for independent pharmacies; and

ii) deal with the nonDSP vs. DSP price difference issue which is said to contravene the Medicines and Related Substances Act.

4.6 Convenient Access and Provider Availability

4.6.1 Develop rules for geospatial efficient allocation of beneficiaries and providers by Living Standard Measures (LSM). This will reduce the vagueness of criteria for determining involuntary use/access to health services. Also, and reduce the likelihood of paying excessive co-payments.

4.6.2 Enforcing Market Conduct Develop intervention within the Corporate Social Responsibility (CSR) framework of the King Commission. This will deal with the issue of enforcing good market conduct by the industry.