UNIFYING PRIVATE HEALTHCARE BY CREATING AN EVIDENCE BASED OUTCOMES METRIC SYSTEM

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EXECUTIVE SUMMARY

INTRODUCTION

True value, as seen by patients, can be measured only by collecting and reporting patient reported outcomes along with clinical and process indicators. The first step in achieving Value Based Healthcare in India lies in patient reporting outcomes measuring and ensuring that this data is available in the public domain for patients to be active participants in their healthcare journey.

TASK

Create an operational evidence based outcomes metric system available in public domain to standardize outcomes, lower cost of care by introducing outcomes based pricing, implementing care continuum and ultimately enhance patient experience and help patients make informed decisions about their healthcare.

METHODOLOGY

Extensive literature review was done to identify global examples of outcomes metric systems and find parallels within the Indian Healthcare System to implement this metric system. Industry viewpoint was gathered through detailed conversations with key players and a questionnaire was formulated and sent to NATHEALTH members and their responses were recorded. Process, clinical and patient reported outcomes were narrowed down based on industry insight and literature review for the diagnosis of Myocardial Infarction based on claims data published by Insurance Information Bureau of India.

ROLE OF NATHEALTH

Conversations with key industry leaders reflected the need for an organization like NATHEALTH to take the lead by initiating and facilitating conversations of creating an outcomes based metric system with private hospitals, private payors and the Government and ensuring all 3 entities were aligned to achieve this goal.

RECOMMENDATIONS

These strategies will provide the foundation for a viable outcomes metric system in India:

1. Partner & Improve: *NATHEALTH leadership should form a core group of individuals/groups working towards creating Value Based Care and work towards continuous improvement through collective learning*.

2. Record: *The consortium should validate outcomes narrowed down in this report by a group of clinicians and researchers prior to implementation.*

3. Compare: *Develop a phased go-to-market strategy to implement and develop a hospital rating program for participating hospitals*.

4. Reward: *Develop a payment model rewarding highest value and quality with the assistance of organizations like Institute of Cost Accountants of India*.

PROJECT BACKGROUND

Micheal Porter has defined value as outcomes that matter to the patients divided by the cost of achieving these outcomes. This definition is applicable to the entire care pathway from primary care to secondary and tertiary care.

The focus of healthcare should be delivering health outcomes that matter to the patients. Unfortunately, in India, due to lack of standardization of outcomes data and transparency within the healthcare sector, delivering Value Based Care becomes a challenge. Furthermore, varied definitions of quality and value shifts the focus from delivering appropriate outcomes and any form of improvement in healthcare.

Quality measures in India are defined only as process measures like waiting times and infection rate that even are though are important measures to collect, don't truly reflect value as seen by patients. True value can be measured only on the basis of what patients consider important for performing their activities of daily living(ADLs).

The starting point in achieving Value Based Care in India is to define and collect outcomes that are not only clinical in nature but also patient reported outcomes.

CURRENT STATE

India has a huge population of 1.38 billion people out of which approximately 75% utilize private healthcare services. India's registered doctor to patient ratio is 1:1456, which is much higher than the

recommended WHO ratio leaving doctors an average of 2 minutes per consult. Lack of time and volume oriented performance metrics leads to low trust amongst patients as well as inconsistent quality of care.

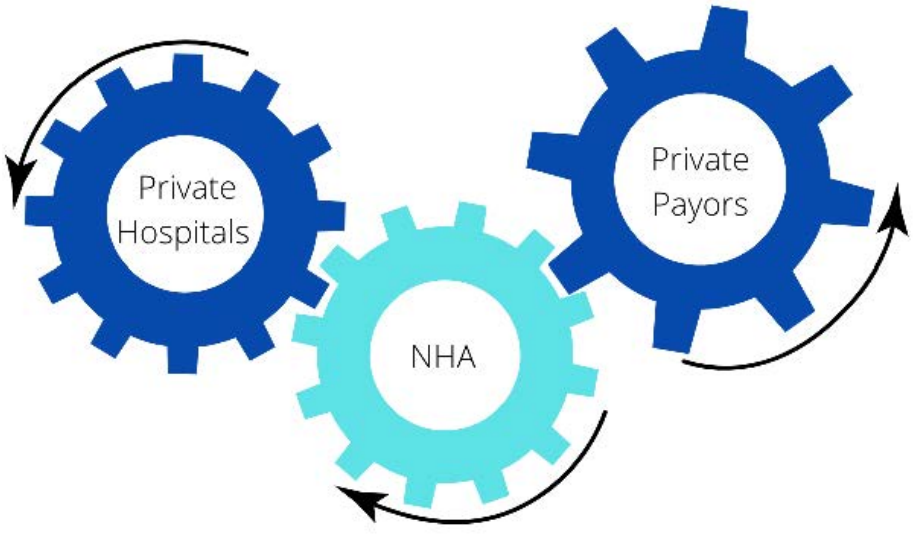
The problem at hand remains- how do we increase patient confidence and experience, create accountability of care provided, lower the cost of care and create value based healthcare in India?

DEFINING TASK AND SCOPE

Creating an outcomes metric system that will not only rate hospitals based on quality of care but will also provide an outcomes data dashboard in the public domain. This will ensure standardizing outcomes, lower cost of care, implement care continuum and ultimately enhance patient experience and make patients active participants in their health care decisions.

ROLE OF NATHEALTH

Conversations with key industry leaders reflected the need for an organization like NATHEALTH to take the lead in initiating and facilitating conversations around creating outcomes based metric system with all 3 entities- Private hospitals, Private payors and Government and ensuring that all 3 of them are aligned towards achieving the goal of outcomes reporting.



RECOMMENDATIONS

1. Partner and Improve:

NATHEALTH leadership should form a core group of individuals/groups working towards creating Value Based Care and work towards continuous improvement through collective learning

Conversations with approximately 30 people from different healthcare sectors were conducted over the course of 3 months to understand industry viewpoint. A questionnaire was also formulated and circulated among NATHEALTH members and data from the questionnaire as well as the interviews was analyzed. Based on insights received from industry leaders, it is evident that the healthcare industry realizes the value and importance of a quality metric system to be standardized in India to promote value based care and make healthcare patient-centric.

Some key insights:

- It is important to use metrics for success that can be independently reported.

- The issue of costing needs to be solved in India. It is important for AB PMJAY scheme to revise its pricing to increase adoption by Tier 1 hospitals.

- Differential pricing needs to be adopted since it is impossible to expect a Tier 1 hospital to perform services at the same cost as a Tier 3 hospital.

- There has to be established political will in making this a success. There have been many conversations around the topic of Value Based Pricing, however, unless there is established Government will in making this a reality, there will be no progress on that front.

- A regulatory body needs to oversee the implementation of an outcomes based pricing system.

STRUCTURE OF CONSORTIUM

Committee	Responsibility	Member
Outcomes Committee	1. Select disease area to pilot the program using claims data 2. Select process, clinical and patient reported outcome indicators based on research 3. Validate the selected outcome indicators	- Clinical researchers - Clinicians -Representatives from hospital quality departments - Hospital senior management -Data Analyst
Quality Enforcement Committee	1. Oversee implementation of outcomes indicators 2. Develop a rating system for benchmarking	- Committee Head - Representative from hospital quality department - Hospital senior management
Payor-Provider Committee	1. Standardize payments based on outcomes(Identify ceiling price for procedures, regular costs, create protocols) 2. Allocation of funds by NHA to report selected outcomes	- Members from payor sector - Members from provider sector - Members from NHA
Technical Committee	1. Design a portal for hospitals to submit data 2. Design and develop a dashboard available in public domain 3. Ensure security safeguards are built	- Software developer

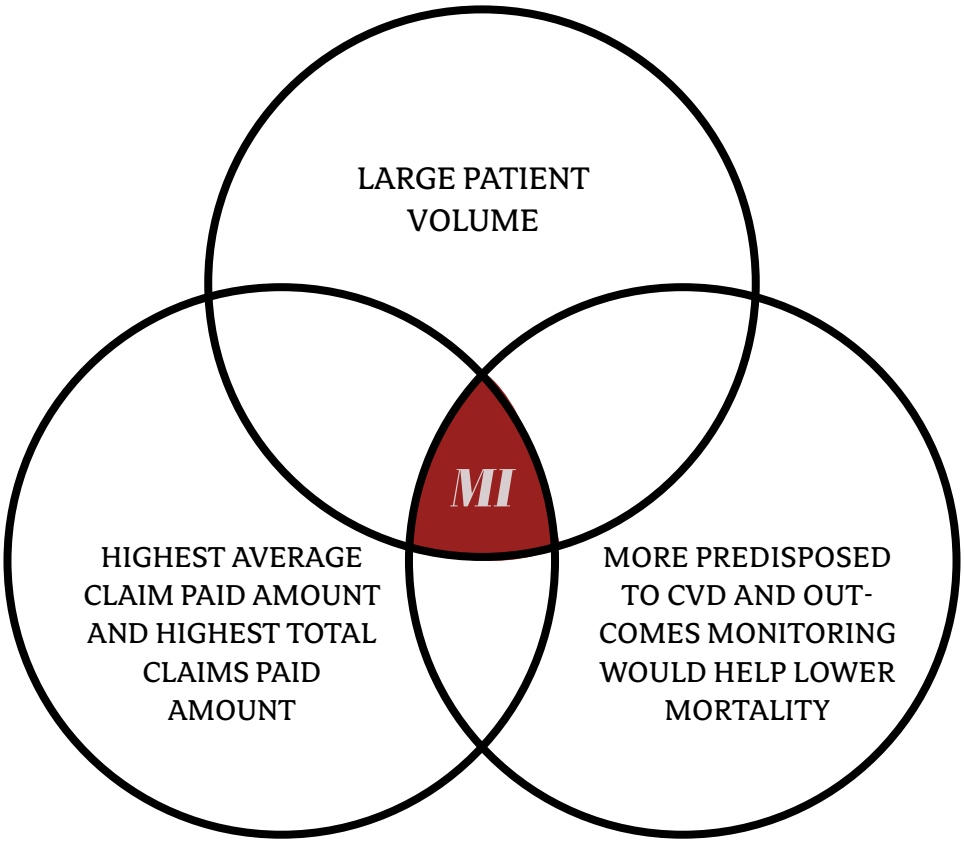
2. Record:

The consortium should validate outcomes narrowed down in this report by a group of clinicians and researchers prior to implementation

Claims data published by IIB established that cardiovascular diseases (CVD) had the highest claims paid amount. For the purposes of this research, myocardial infarction(MI) was narrowed down since WHO estimates that by 2030, CVD will be the main cause of death throughout India, accounting for more than 35% of all deaths.

MI pathologically is defined as myocardial cell necrosis due to significant and prolonged ischemia resulting from either obstruction of blood flow due to plaques in coronary arteries or, much less frequently, due to other obstructing mechanisms like spasm of plaque-free arteries.

Compared to western population, Indians are predisposed to CVDs which occur 6-10 years earlier with higher rates of mortality.



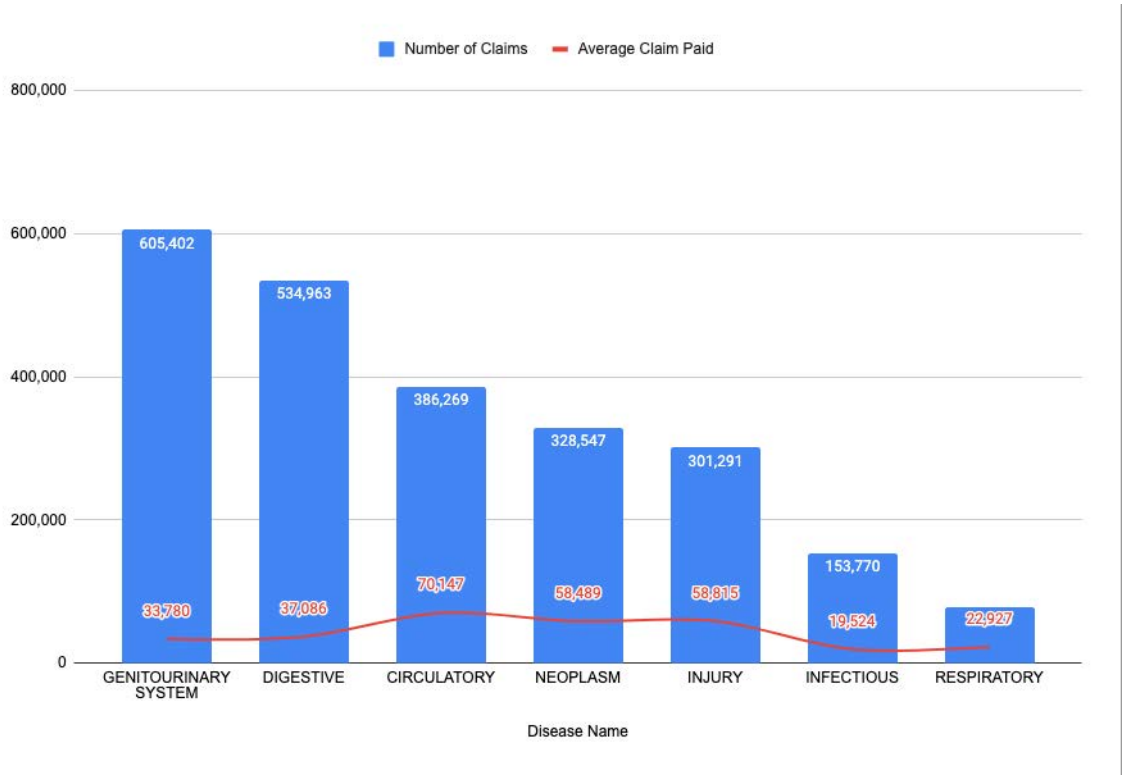


Fig 1: Relationship between number of claims and average claim paid for an ICD-10 Code

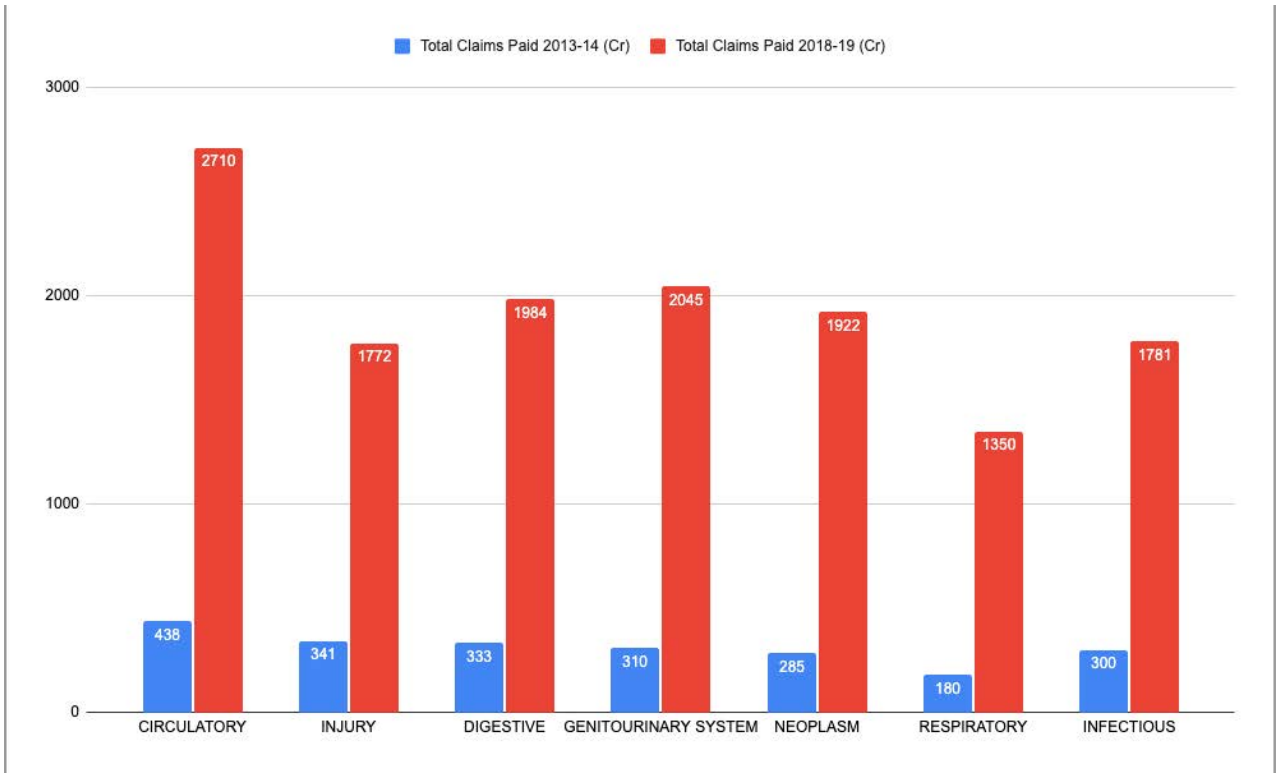


Fig: Comparison of Total Claims Paid based on ICD-10 codes in 2013-14 with 2018-19

GLOBAL QUALITY METRIC SYSTEMS STUDIED

1. Centers for Medicare and Medicaid Services(CMS)

QualityNet Secure Portal is established by CMS and is the only HIPAA and CMS approved portal for secure communication and healthcare quality data exchange between hospitals, physicians offices, nursing homes and Quality Improvement Organizations.
-HCAHPS(Patient Experience)
- Inpatient Quality Measures
-Outpatient Quality Measures

2.Agency of Healthcare Research and Quality(AHRQ)

AHRQ indicators are designed for use by program managers, researchers, Federal, State and Local levels. The software uses inpatient records of hospitals to generate reports.
-Prevention Quality Indicators
- Inpatient Quality Indicators
- Patient Safety Indicators
- Pediatric Quality Indicators

3. Private Health Information Network (PHIN)

Independent Government mandated source of information for all of private healthcare. Acute Data Alignment program is an effort to create a single unified source for healthcare in England, UK.

4. International Consortium for Health Outcomes Measures(ICHOM)

ICHOM brings together working groups consisting of patients, healthcare professionals and researches and registries from major regions of the world to develop global standard sets of outcome measures for different disease areas. They have published 39 open access standard sets so far and continue to work on publishing more for all disease areas.

OUTCOME INDICATORS

The outcomes narrowed down are based on extensive research of outcomes metric systems globally and only frequently repeated indicators are included

Process and Input Indicators

Average length of stay
Number of patients
Patient Satisfaction/Experience (HCAHPS)
Healthcare associated infection rate
Average waiting time
Average mortality rate
Bed occupancy rate
Discharge rate
Doctor/Nurse to bed ratio
Average readmission rate

Clinical Indicators for MI

DEMOGRAPHIC INFORMATION	Age Gender
BASELINE HEALTH STATUS	Smoking Alcohol Past Medical Conditions Height/Weight Co-morbidities Heart Diagnosis Ejection Fraction
CURRENT MEDICATIONS	Mention all medications that are commonly used for MI Did the patient receive blood thinners within 30 minutes of arrival in the OPD?
CARDIAC INTERVENTION	Date of surgery/Type of surgery Date of arrival/Date of discharge(To calculate LOS) Complications due to intervention(Date) Complications due to any other factor(Hospital acquired infections) Blood transfusion required within 72 hours post intervention Average number of minutes before a patient in an outpatient setting with chest pain who need specialized care were transferred to another hospital
READMISSION	How many times has the patient been admitted within 30/60/90 days post discharge? Hospital appointments in the last 6months-1year for the same condition?
MORTALITY	Date of death Cause of death

Patient Reported Outcome Measure for MI

Kansas City Cardiomyopathy Questionnaire-12	a) How much are you limited by your condition while - Showering - Walking 1 block on level ground - Jogging/Brisk Walking b) How many times over the past 2 weeks did you experience swelling in your feet/ankles when you woke up in the morning? c) Over the past 2 weeks, how many times has your fatigue limited your ability to do what you want to do? d) Over the past 2 weeks, on an average, how many times have you been forced to sleep sitting up in your chair or with 3 pillows propped up due to shortness of breath? e) Over the past 2 weeks, how much has your condition limited your enjoyment of life? f) How much has your condition affected your lifestyle?
Patient Reported Outcomes Measurement Information System	a) Are you able to do chores like vacuuming? b) Are you able to go down the stairs at a normal pace? c) Are you able to walk for 15 minutes? d) Are you able to run errands and shop?
Patient Health Questionnaire	a) Over the past 3 weeks how often have you felt little interest or pleasure in doing things? b) Over the past 2 weeks how often have you felt feeling low, depresses or hopeless?

3. Compare:

Develop a phased go-to-market strategy to implement and develop a hospital rating program for participating hospitals.

Before piloting this program, it is important to sensitize various healthcare groups to the topic of outcomes reporting and gathering and outcomes based pricing with tools like:

- Publishing white papers in journals/newsletters
- Panel discussions

This would help in increasing awareness and establishing need for a system like this to be adopted -Incorporating any feedback received at this stage will ensure smooth implementation of the go-to-market strategy

Phase 1:

Once the indicators are validated, the program can be piloted in a select few hospitals for the test group of MI. The pilot will help us test the platform and the selected outcome measures. It will also help us establish billing protocols specifically for MI and create a seamless dashboard which will be used by senior administrators and quality control department in the selected hospitals and feedback will be gathered.

Phase 2:

Post gathering feedback obtained during the pilot and making modifications as necessary, the program can be expanded to all participating hospitals only for the diagnoses of MI. This will give us the opportunity to gather the data and build a hospital rating system and update technology and modify indicators, if needed.

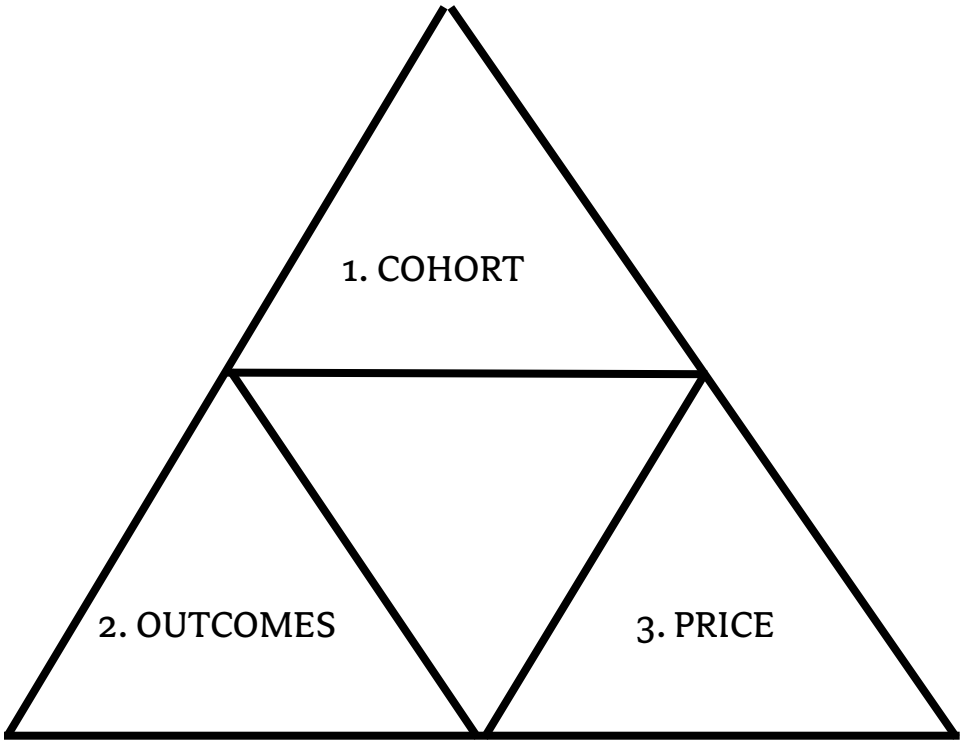
Phase 3:

The final phase will include slow expansion to all diagnoses and help us develop a seamless integrated hospital dashboard which will be available in the public domain. Marketing this dashboard to patients will ensure that they are aware of such a system and will help them use this dashboard to make informed decisions regarding their healthcare plans.

4. Reward:

Develop a payment model rewarding highest value and quality with the assistance of organizations like Institute of Cost Accountants of India. The Institute of Cost Accountants of India aims to develop uniform rates for all medical procedures and performance costing and rating and for all healthcare providers.

"If individuals in a clearly defined cohort achieve(or improve towards) a desired outcome, as measured by agreed process or tool, over a certain time span, compared to what we might expect to happen otherwise, then an outcome payer will pay an agreed amount of money."- Government Outcomes Lab.



In order to set the price for value, it is important to define the upper bound of value per outcome and also the upper bound of cost per outcome. Once both these bounds are defined, a price can be set between these bounds which will benefit the hospital as well as the payor.

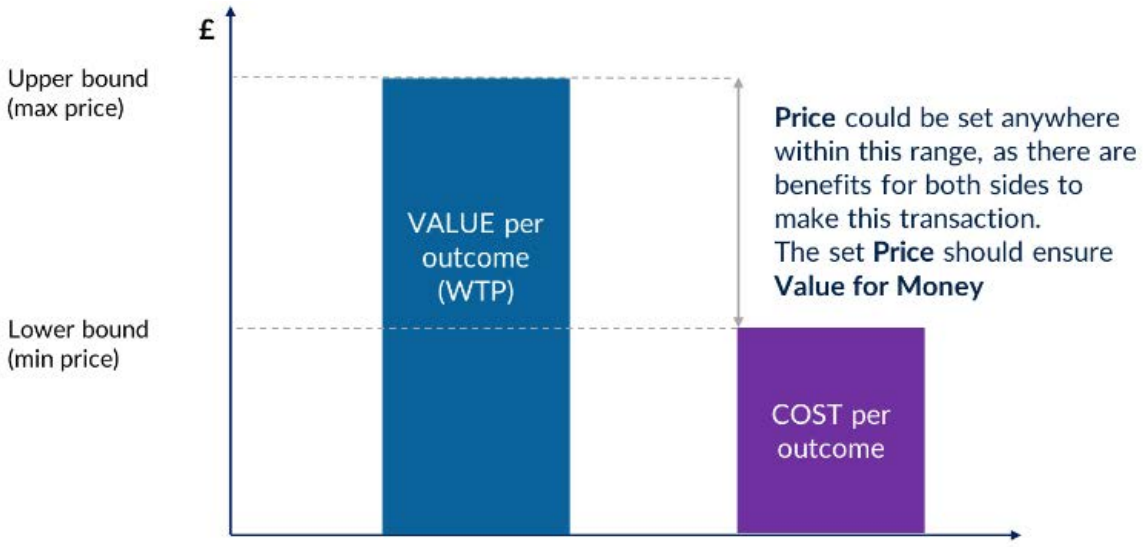


Fig: Value, Cost and Price-Government Outcomes Lab

India falls on the lower spectrum of physician/hospital alignment and care co-ordination, which is the reason why India is still operating on a fee-for-service model. Adopting a pay-for-performance model or captitation model or gainsharing model will help India add a value based care component to its existing model.

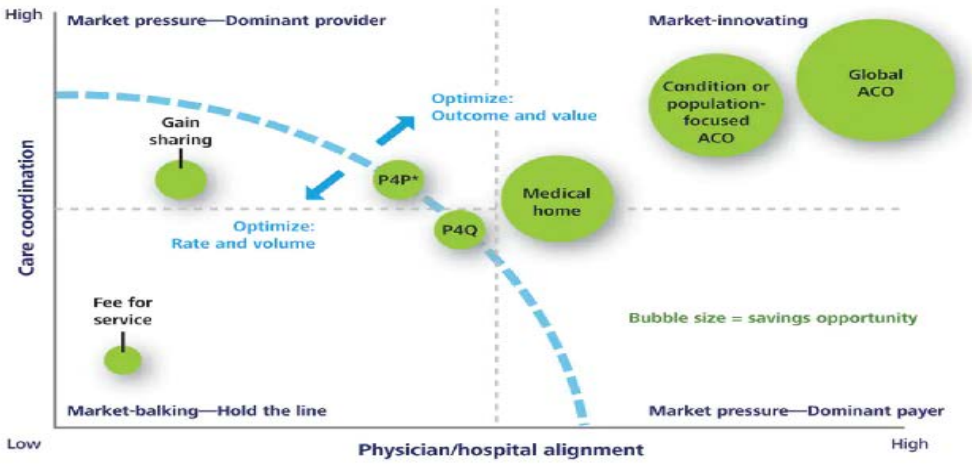


Fig 2: Transition to Value Based Payment, Deloitte Insights

VALUE BASED PRICING MODELS THAT CAN WORK IN INDIA

a)Pay-for-performance Bonuses

Pay a bonus when the provider achieves a pre-determined outcome. This method has a value added component to the traditional fee for service model.

1. Upside Incentive: will help limit provider risk
2. Downside risk: Base compensation will be put at risk if provider is unable to achieve outcomes

Most common approach used by multiple health systems to introduce a component of value based care with limited risk associated and has shown to improve health outcomes.

The Swiss GP receive a base compensation which is a combination of per-patient subscription and fee-for-service. But they have potential to earn a bonus when the network's quality-of-care score is higher than pre-determined threshold. The networks reduced their costs by 17% when compared to a control group and improved quality of care.

b) Capitation

Capitation is a model that has been implemented widely and it shifts the entire risk to the hospital. The medical scheme pre- pays a fixed amount to the hospital for every member that
is covered by the payor for the entire benefit period and this provides an incentive to the hospital to lower costs by avoiding costly services. This payment method however does not incentivize hospitals to improve quality of care that they provide as a result of which lower quality of care could be noticed. This payment method however can be coupled with a performance bonus system to account for quality of care.

c) Gainsharing

Incentive arrangement between hospitals and doctors requiring the doctors to consider the entire care pathway and gives the doctors an incentive to receive a share of hospitals savings.

CONCERNS EXPRESSED BY KEY PRIVATE PAYORS:

Conversations with key players within the private insurance sector revealed concerns regarding implementation of an outcomes based pricing model. Few of the concerns expressed are:

1) Information asymmetry

2) No uniformity on tariffs as a result unable to calculate ceiling prices for every diagnosis

3) No Gate-keeping to implement a capitation model for care integration

4) Unable to implement value based pricing model unless a regulatory body enforces it for all payors

5) Incentivization is necessary but insurance companies will not put in additional money to develop this. If there is an investor/government who brings in money and it proves that there is cost savings that happen, only then insurance companies will implement

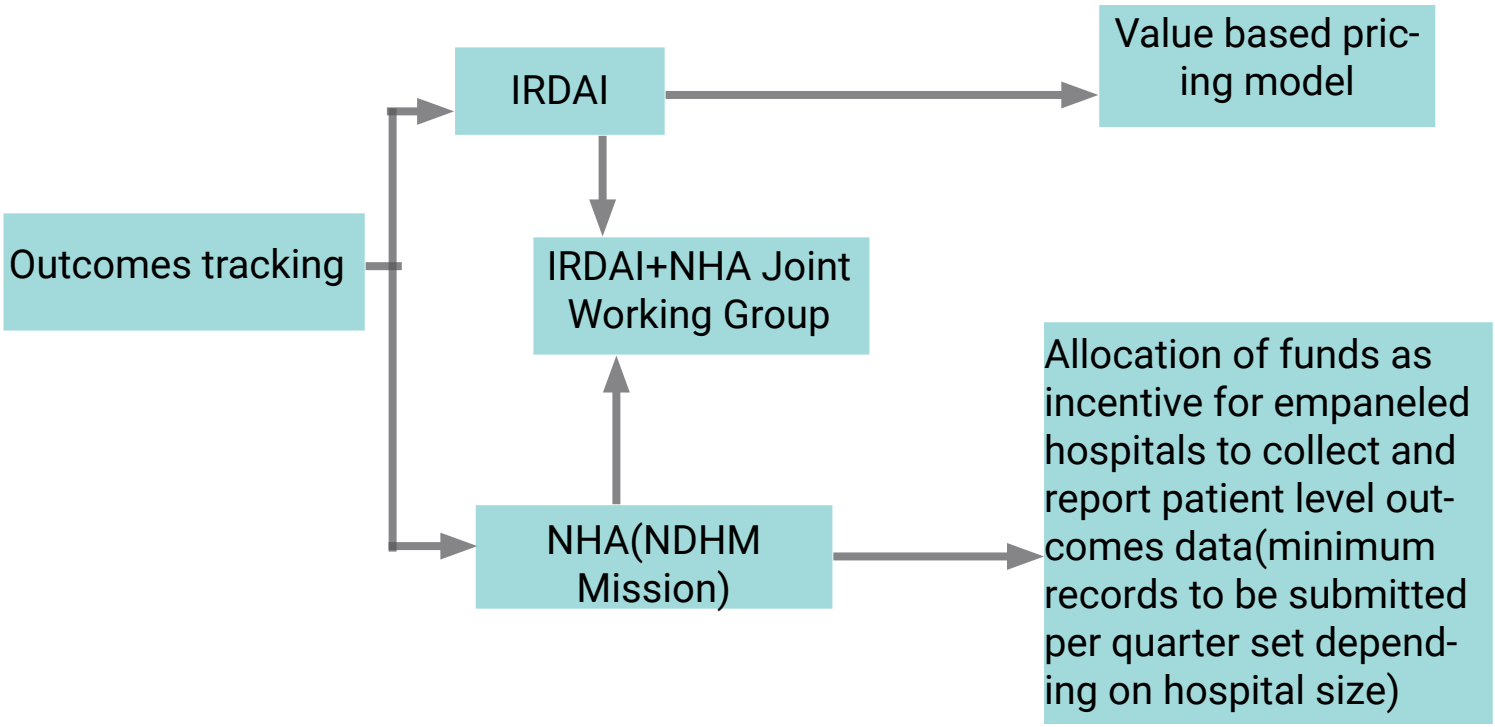
Can implement a VBC model only if hospitals, Government and payors join hands to achieve this model

PATHWAY FOR PAYORS

Since the biggest concern expressed by members of the private insurance sector was lack of regulatory control, an outcomes based pricing model can be implemented in two ways ensuring involvement of regulatory bodies like IRDAI and NHA.

The first method involves IRDAI taking responsibility and creating a value based pricing model and mandating implemetation for all private payors.

The second method would involve implementation by NHA and NDHM which aims to improve healthcare quality. This could either happen as redistribution of funds allocated for NABH reporting(10% and 15% for silver and gold accreditation respectively) to include reporting of patient reported outcome measures as well or create a separate fund as incentive to empaneled hospitals to collect and report patient level outcomes data which will be based on the model Centers of Medicaid and Medicare Services operates on.



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QUESTIONNAIRE

NAME
JOB TITLE
EMAIL ID

1. Do you think collecting outcomes based data is of value to the Indian Healthcare System?
a) Help build trust between patients and providers
b) Make healthcare sector more accountable
c) Standardize cost of care
d) Enhance patient experience
e) Others(Please specify)

2. Do you think India has a national standard outcomes metric system in place?
a) If yes, which one? b) If no, why?

3. Are you aware of any global organizations that collect outcomes based data?

4. Does your organization collect any clinical quality outcome measures?
a) Yes b) No c) Other (Please specify)

5. Does your organization collect any patient experience data?
a) Yes b) No c) Other (Please specify)

6. Would you be willing to share the indicators that are collected by your organization to measure clinical quality and/or patient experience data?
a) Yes b) No

7. Do you report these collected measures?
a) Yes b) No

8. What benchmarks do you use to validate the collected data?

9. According to you, what outcome measures are of most value to collect in the context of Indian Healthcare System?

10. For the purposes of this research, would you be willing to discuss this topic in more detail?