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Qualidade e Segurança na Saúde

Lessons from the Implementation of the Healthcare Delivery Performance Index to Measure Quality of Primary Care in Costa Rica
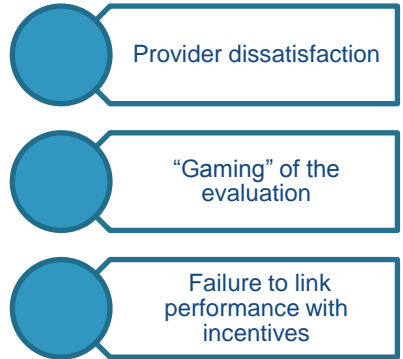
C O N T E X T:

- **1994 - Costa Rica reformed primary health care system**

- **Primary care provided by Health Areas, which each supervise 5-20 primary care clinics**

- **The Social Security Administration (CCSS) runs all public hospitals and clinics and covers 95% of the population**

- **Over the past 25 years, the CCSS developed novel ways to measure primary care quality**

SEGURO SOCIAL
COSTA RICA

T H E   P R O B L E M:

- **1997- 2007 – the CCSS used Management Contracts to measure quality and assign financial incentives**

- **In 2009, an internal review revealed dissatisfaction and signaled the need for changes in evaluation**

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D E V E L O P M E N T   O F   A   S O L U T I O N:

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- **New way to rank Health Areas: the Healthcare Delivery Performance Index**

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Top Quintile

Second Quintile

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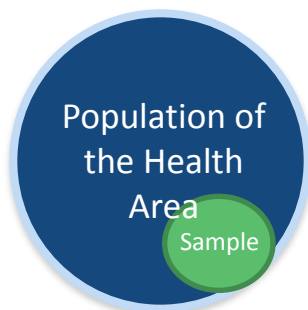**Qualidade e Segurança na Saúde**

THE INDEX:

- **Goal to create an index that measures these five dimensions and is comparable between different primary care Health Areas**

- **Goal for this index to be a tool in health care management**

- **Defined 15 indicators based on the CCSS treatment guidelines**

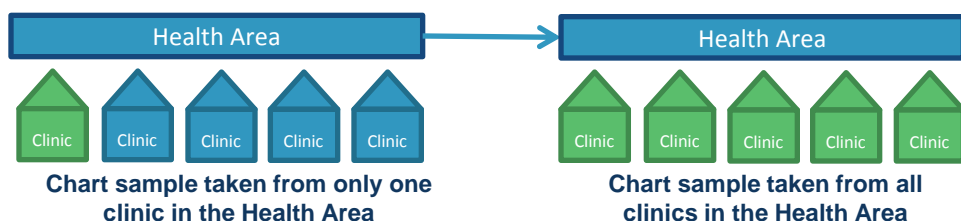| Chronic Care indicators	Maternal Health Indicators	Child Health Indicators	General Indicators
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Clinic Clinic Clinic Clinic Clinic

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STATISTICAL EVALUATION:

- **Must combine score from each indicator to make overall score for the index, but over time, the statistical model used has changed**

Simple Weighted Average

$$(1X + 2Y + 3Z) / W = \text{Index Score}$$

- **Difficulties with this design:**
  - o **Performance on one indicator could compensate for others**
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Factor Analysis Model

Year 1: $4X + 1Y + 1Z = \text{Index Score}$
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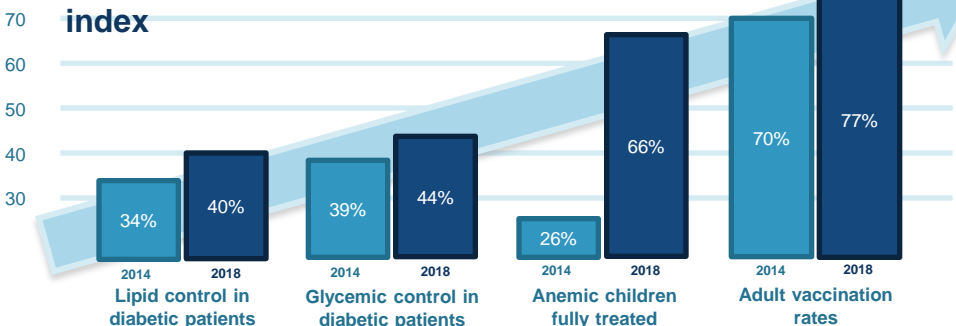 - o **Statistical model behind the analysis opaque**

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RESULTS:

- **Since the index was created, improvements have been shown across adults and children on nearly every indicator in the index**
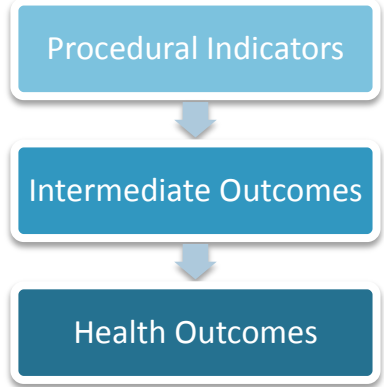
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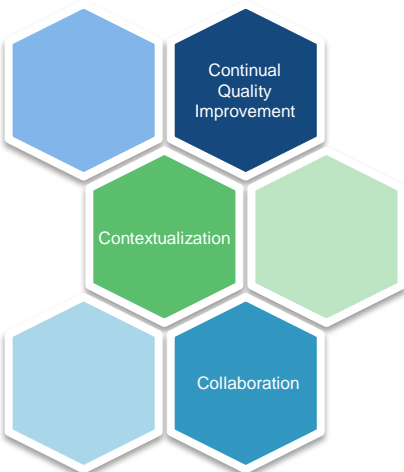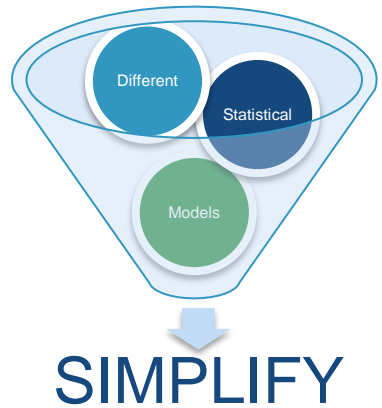- **Experience with the index has yielded valuable insights into the construction of quality indices**

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- **Outcome > procedural**
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- **Should select indicators that match and promote your values**

Procedural Indicators

↓

Intermediate Outcomes

↓

Health Outcomes

Complexity of the Index Calculations

- **Pursuing high-end statistical models that are very complex may limit their utility**
- **Must balance desire to thwart "gaming" with ease of use**
- **For index to drive change, Health Area managers should:**
  - o **Understand the evaluation**
  - o **Believe in the index**

Different

Statistical

Models

↓

SIMPLIFY

Continual Quality Improvement

Contextualization

Collaboration

Interpretation of the Index

- **Define the index's role early**
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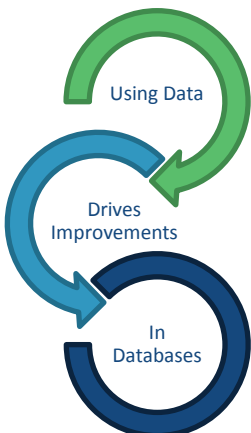

Flexibility

•**Frameworks can be adapted – continual tweaks and improvements are essential**

•**If the system doesn't work, search for a better way to evaluate**

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•**Financial incentives are not always necessary to make quality improvements**

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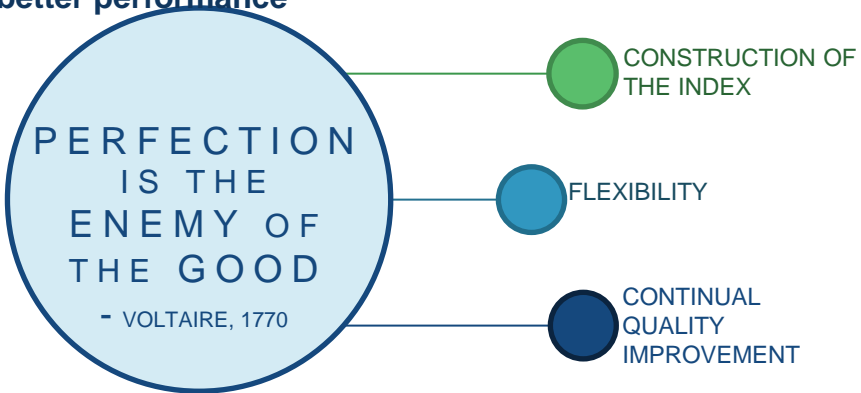

Improvements in data systems

•**The use of the data system will improve the quality of the data itself**

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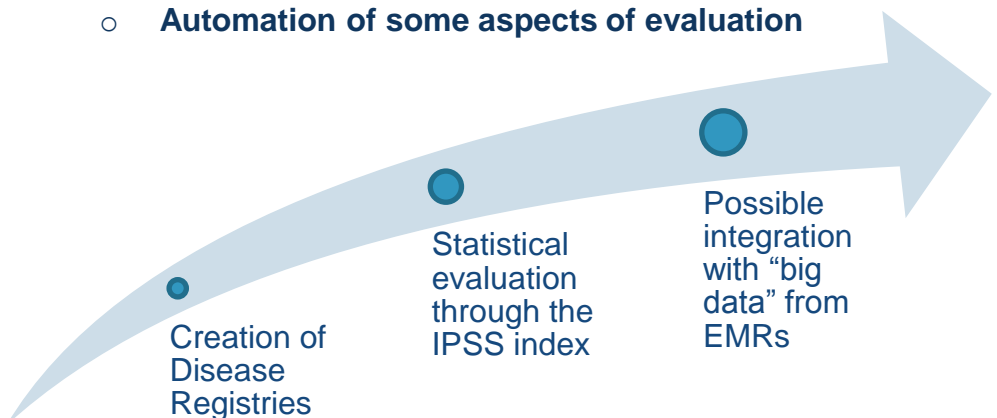
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PERFECTION IS THE ENEMY OF THE GOOD
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CONSTRUCTION OF THE INDEX

FLEXIBILITY

CONTINUAL QUALITY IMPROVEMENT

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Creation of Disease Registries

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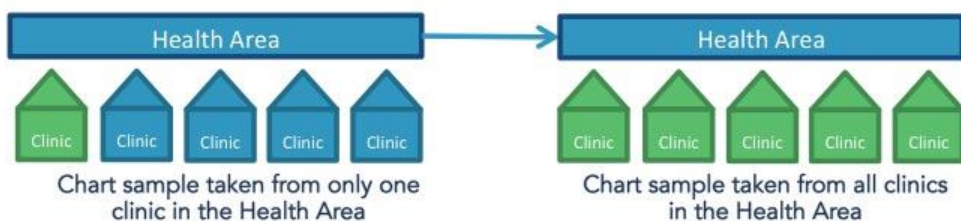| Chronic Care indicators	Maternal Health Indicators	Child Health Indicators	General Indicators
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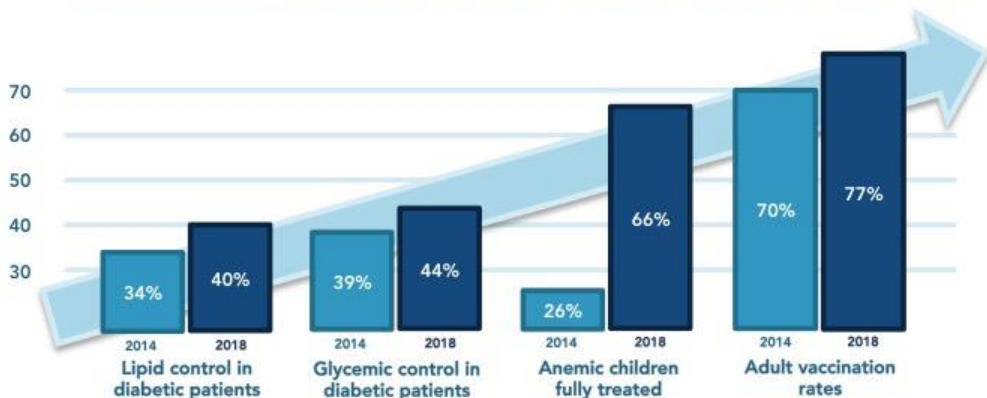 - Statistical model behind the analysis opaque

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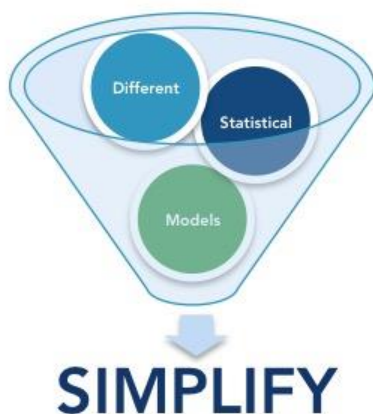
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Using Data
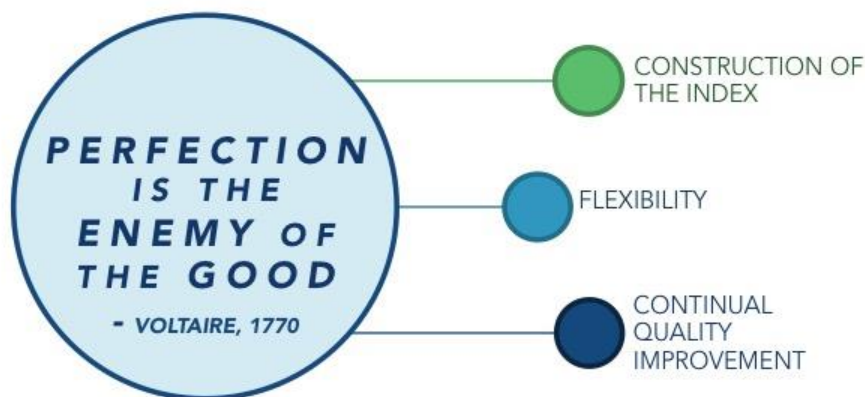
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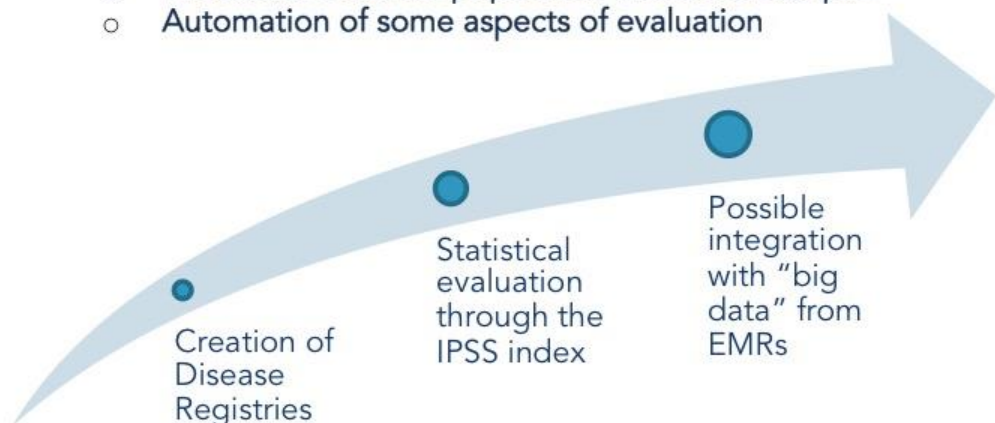**Qualidade e Segurança na Saúde**

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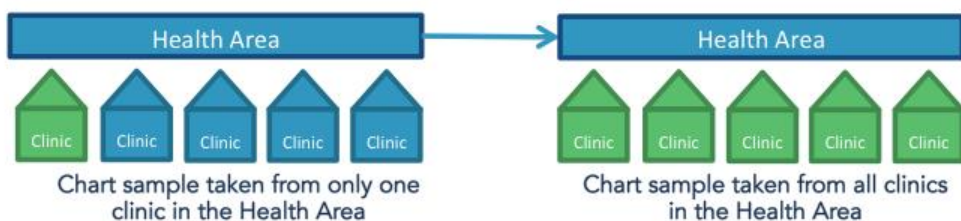| Chronic Care indicators	Maternal Health Indicators	Child Health Indicators	General Indicators
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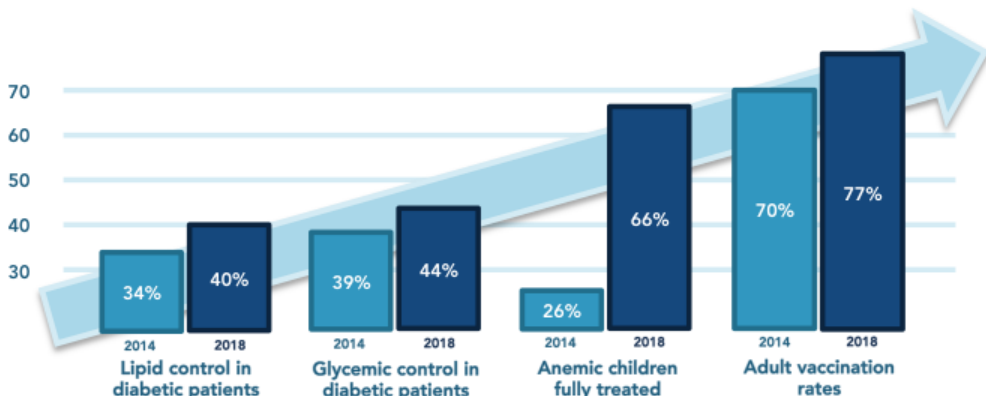 - Statistical model behind the analysis opaque

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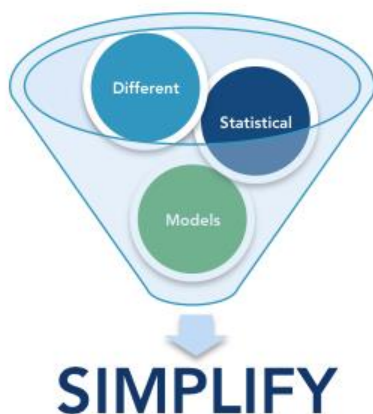
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- No model is perfect, but having a framework for evaluating quality is important

Interpersonal incentives are effective

- Financial incentives are not always necessary to make quality improvements
- Interpersonal incentives can be motivating
    - Substantial improvements can be made by demonstrating clinics' performance against one another
- The index helped to maintain the interest of Health Area directors, after financial incentives were removed
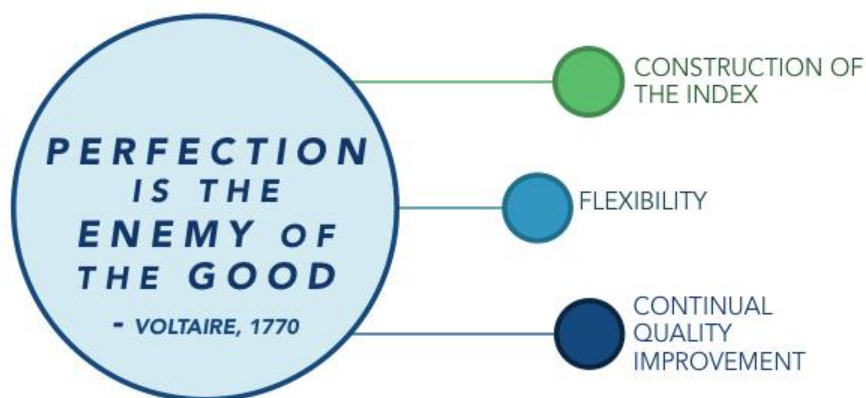

Improvements in data systems

- The use of the data system will improve the quality of the data itself
- Can't wait until the data is perfect – as scientists we always want sources of data to be perfect before we begin
- When the data system is used, more effort is put into the maintenance of those systems

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CONCLUSIONS:

- The experience of the performance index solidified the importance of continual quality improvement in primary care
- The index has promoted a change in the culture of the CCSS
  - Changed from an evaluation of services rendered to a tool to improve performance and promote population health
  - Cultivating a culture of continual improvement is important, difficult, and possible
- Existence of an quality index, even if imperfect, pushes toward better performance

PERFECTION IS THE ENEMY OF THE GOOD

- VOLTAIRE, 1770

CONSTRUCTION OF THE INDEX

FLEXIBILITY

CONTINUAL QUALITY IMPROVEMENT

FUTURE DIRECTIONS:

- As international norms of quality improvement continue to evolve, Costa Rica's quality evaluation must evolve alongside it
- Recent introduction of a new universal digital health record provides opportunities:
  - Integration with "big data"
  - Evaluation of whole population instead of samples
  - Automation of some aspects of evaluation

Creation of Disease Registries

Statistical evaluation through the IPSS index

Possible integration with "big data" from EMRs