Incorporating Quality Improvement Methodologies into HAST Management Strategies at a Sub-District Level

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1. Background and Objectives

- The Aurum Institute has worked with the Ekurhuleni North HIV AIDS STI and TB (HAST) management team on a Quality Improvement (QI) initiative since February 2012. The project has evolved from being programme specific and Aurum driven, towards being adopted as a broader managerial philosophy applied to the all HAST programmes.

Objective
- To document and analyze ways in which the QI programme has evolved over this period.

Quick Facts about Ekurhuleni North:
- There are 27 PHCs and 2 MOUs
- The HIV Prevalence amongst pregnant women is 29.8% according to DHIS statistics from March 2012 to March 2013[1]
- Caters to a highly migrant population of approximately 989,145 people[1]
- Tembisa, Kempton Park, Benoni, Edenvale and Boksburg all fall in this sub-district

2. Methodology

Through the application of Deming's framework of "Profound Knowledge" we used qualitative, open ended interviews and meeting observations to tease out and categorize vital themes and concepts that evolved throughout the project[2]. These data were triangulated with a closed ended survey to verify themes that emerged among a wider sample of participants.
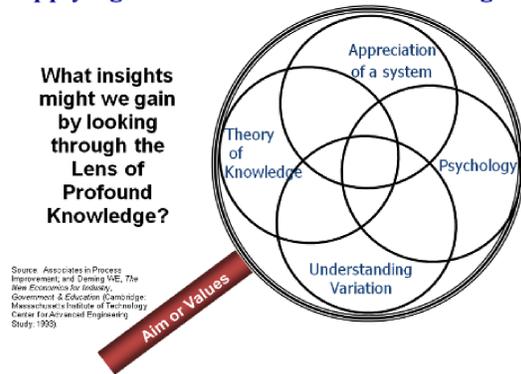

Figure 1: Deming's Lens of Profound Knowledge

3. What is the Lens of Profound Knowledge

WE Deming was one of the pioneering intellectuals of the modern quality improvement movement. Over 4 decades of working on improvement in multiple industries across the world he began to consolidate his thinking around four main aspects that have to be considered when working on improvement. He called this the lens of Profound Knowledge and defined it as "the interplay of the theories of systems, variation, knowledge and psychology." [3]

Appreciation of the System - Because Most Products and services result from a complex system of interaction among people, procedures and equipment, it is vital to understand the properties of a system. [3]

Psychology of Change - Knowledge of the human side of change helps us understand how people, as individuals, interact with each other and with a system. It helps us to predict how people will react to a specific change and how to gain commitment. It helps us understand the motivations of people and their behaviour. [2]

Understanding Variation - Everything we observe or measure varies. In order to understand whether or not a change is an improvement we have to understand this variation.[2]

Theory of Knowledge- In the context of improvement, a change is a prediction: if the change is made, improvement will result. The more knowledge one has about how the particular system under consideration functions or could function, the better the prediction and the greater the likelihood the change will result in improvement. Comparing predictions to results is a key source of learning. [3]

REFERENCES :

1. District Health Information System (DHIS)
2. Deming, W. E. (2000). The new economics: for industry, government, education. The MIT Press.
3. Langley, G. J., Moen, R., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: a practical approach to enhancing organizational performance.* John Wiley & Sons.

4. Results

- In relation to appreciation for a system, the analysis identifies the gradual evolution of specific PMTCT QI projects at a facility level, to a general application of QI methodologies into other aspects of the HAST programme (e.g. TB, Adult HIV, Peadiatrics). This evolution was also evident in the way sub-district managers had begun to incorporate QI methodologies(PDSAs, run charts, root cause analysis) into the daily management of their programmes.

- With regards to understanding variation there was an overall perception that a culture of utilizing data to understand improvement had developed throughout the project. One sub-district manager said, "*Before the project we used to overreact to data that actually only represented that common cause variation thing. We also used to look at a single month of data without any reference point to the baseline*".

- In relation to the psychology of change the overall feeling of the group was that a culture of safety to experiment had developed over the project's life as opposed to the compliance driven management approach everyone was used to. In a similar light there was a perception that motivation has shifted away from external punishment and reward thinking and now people were intrinsically motivated to improve their services from within the facility.

- Building Knowledge was probably the least developed pillar of the profound knowledge. While facilities were undeniably testing out changes using PDSA cycles and in doing so intuitively practicing a deductive and inductive approach, the understanding of testing out theories and predictions was not well developed. One Sub-district manager said "*this prediction thing is confusing, you predict what you will do will work, how does that help anybody?*"
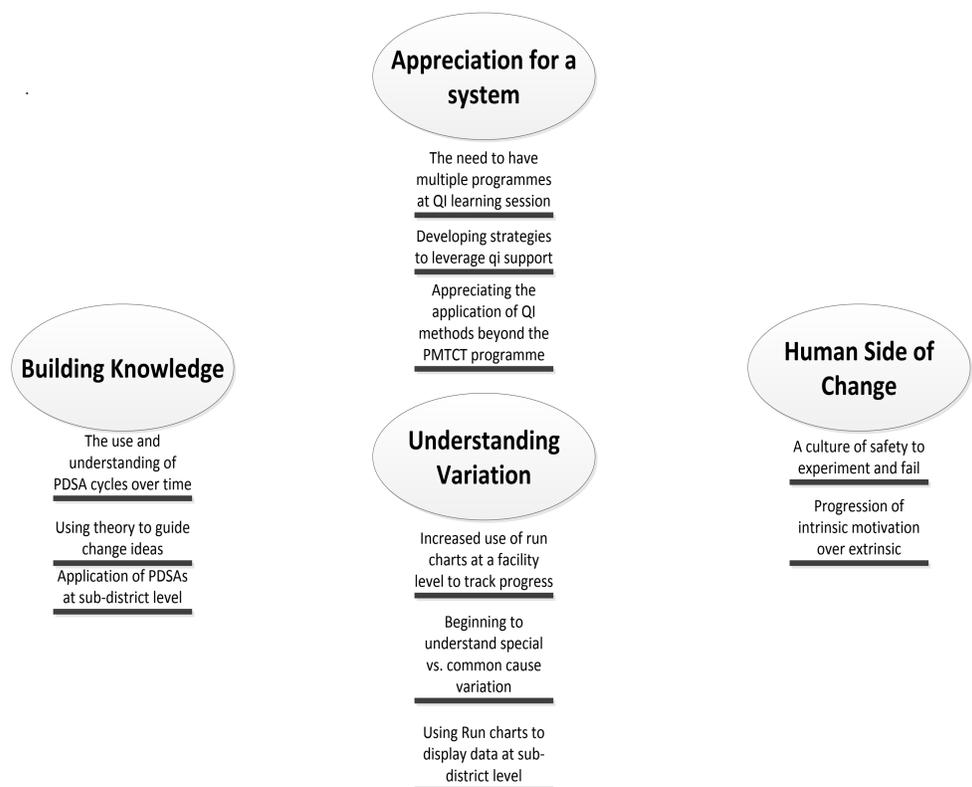

Figure 2: The emergent themes of the research categorized according to the different lenses of profound knowledge

5. Conclusion and Recommendations

The QI project in Ekurhuleni North has evolved and progressed in multiple ways throughout its life-time. Through applying Deming's framework of profound knowledge the research was able to tease out how some of the key stakeholders saw this evolution. This small scale project situated within the PMTCT care pathway has been able to bring multiple perceived benefits to the entire HAST programme that have accumulated over time.

The recommendations would therefore suggest that working on one treatment pathway within one programme can be an effective entry point into affecting significant change across a the multiple services within a public healthcare setting.