

# Change Management For Hospitals

Through Stepwise Approach, **5S-KAIZEN-TQM**



Edited by  
**Toshihiko Hasegawa**  
*MD, MPH, PhD*

And  
**Wimal Karandagoda**  
*MBBS, MSc. (Med. Adm.)*

**Second Edition**  
**March 2013**





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## **Preface for Second Edition**

Since the first edition, the concept and practice of “5S-KAIZEN-TQM” has been spread not only to African continent but also to the whole world. So very rich experiences have been accumulated. In many countries, KAIZEN step has already started and aiming to TQM step. Therefore, the Editors have decided to update the text book.

Useful experiences are collected and added to the first edition. The new concept of “New Management” has also been added to integrate the KAIZEN and TQM step. We hope this new edition will help you to understand concept better and to improve performance.

We consider this text book is the forum among editors and practitioners. So you all are welcome to contribute your experience to this textbook and to discuss your idea. Certainly this collaboration will lead to the “5S-KAIZEN-TQM” of this textbook itself

It has been claimed that there is no management exist in developing countries. But we are all convinced that claim is wrong since successful hospital management are starting in many countries by this Method. The issue is not the capacity of the people but the method.

Let us improve our management using this “New Management Method” as “5S-KAIZEN-TQM”.

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## Abbreviations

|             |   |
|-------------|---|
| AAKCP;      | Asia African Knowledge Co-creation Program    |
| AIH;        | Aso Iizuka Hospital                           |
| CD;         | Classified Day Employees                      |
| CEO;        | Chief Executive Officer                       |
| CQI;        | Continuous Quality Improvement                |
| CSSD;       | Central Sterilization and Supply Department   |
| ECG;        | Electric Cardio Graph                         |
| IEC;        | Information, Education, Communication         |
| ISO;        | International Organization of Standardization |
| JICA;       | Japan International Cooperation Agency        |
| LR;         | Labor Room                                    |
| M/E;        | Monitoring and Evaluation                     |
| MIS;        | Management Information System                 |
| MOH;        | Ministry of Health                            |
| MOHSW;      | Ministry of Health and Social welfare         |
| OJT;        | On the Job Training                           |
| OPD;        | Outpatient Department                         |
| PDCA cycle; | Plan-Do-Check-Act cycle                       |
| QC;         | Quality Control                               |
| QIT;        | Quality Improvement Team                      |
| SQC;        | Scientific Quality Control                    |
| TOT;        | Training of Trainers                          |
| TQM;        | Total Quality Management                      |
| WEI;        | Work Environment Improvement                  |
| WIT;        | Work Improvement Team                         |
| WHO;        | World Health Organization                     |



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# I...Introduction

## I-1...Objective and Contents of the textbook

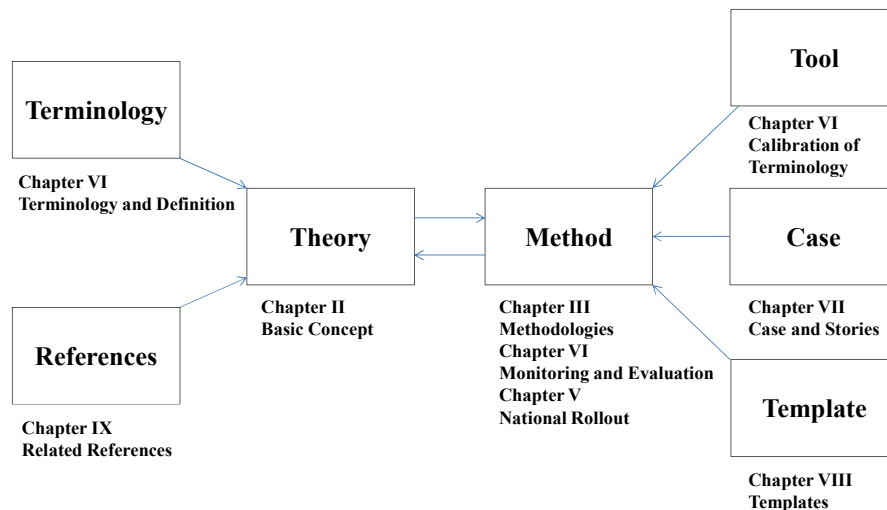
This is the first standard textbook of the three-step-approach; “5S-KAIZEN-TQM” <5S: *Seiri, Seiton, Seiso, seiketsu and Shitsuke*, *KAIZEN: 改善 (An evidence-based participatory problem solving)*, *TQM: total quality management*> to improve hospital management under limited resources.

The context of this text book is based upon the success experience in Sri Lanka and some African countries. The goals of the change are shifted from “Provider centered care” to Patient centered care”, from “Input oriented management” to “ Outcome oriented management” and from “Top down approach” to “Participatory approach”. The theory and method of the change management can be learned through this comprehensive textbook.

For the beginners, the “Theory and Practice” of this new participatory method is laid out in this book to embrace the stepwise approach. For the experienced “Tips and Secrets” of this useful tool can be found in this book to advance the step further. Using the valuable information included in this book, managers, regardless categories and ranks, which are in charge of managing facility-based health services, can be assured to understand the keys to success for better managerial practice at their own health facilities or for dissemination of the method to other hospitals.

The focus of this textbook is both on Theory and Practice, as mentioned above. For good and right practice, it is true that practical knowledge has to be learnt and skill to be well trained at the field. But the practice has to be based on the sound theory. In this context, this book is rich also on relevant cases and inspiring stories. Readers can test the theory through the described cases and learn methods from the real experiences of pioneer hospital managers. Tools and answers to frequently asked questions (FAQs) will be helpful both to the beginners and the experienced.

### Contents of This Book



If the reader is interested in the overview of this approach of 5S-KAIZEN-TQM, Chapter I can be the point of entry out of actual experiences, cases and stories. If the reader is experienced, the tools or answers to FAQs can be directly searched for the solutions, which can be directly utilized for their daily tasks.

## I-2...History of the newly developed stepwise approach

Proposed new approach is based on the Japanese management tools originally used in industrial sector like Toyota and other companies. But it has been rooted in Japanese traditional culture “Tea Ceremony” or “Omotenashi”. In 2000, Dr. Wimal Karandagoda, director of Castle Street Hospital in Sri Lanka, first applied this industrial tool to health sector at the maternity hospital, where he, as the hospital director, worked for. Although he experienced resistance from the workforce in the initial stage, he successfully installed the 5S activities and gradually spread them to the whole hospital. Dr. Wimal Karandagoda invented the stepwise approach from 5S to KAIZEN then to TQM. KAIZEN is the Japanese word for the Continuous Quality Improvement (CQI). This problem-solving process can spread to whole organization under the top management’s leadership. TQM stage, thereafter, can be started.

The reason for this success is to use bottom up approach “5S” as the base of continuous team approach “KAIZEN”. Because 5S is easy to understand by everybody and the achievement can be appreciated by their own eyes, this work environment improvement activity nurtures positive mindset among the workers and confidence in the team approach, which can empower both by mid-level managers and the front-line work forces.

During the development of the Health Master Plan of Sri Lankan Government, supported by Japan International Cooperation Agency (JICA) in 2002-2007, this 5S-KAIZEN-TQM approach became recognized as one of the important components of health sector reform. It was decided by the Ministry of health (MOH) to extend the approach to the whole country. Strategic plan for dissemination was made and Castle Street Hospital for Women (CSHW) became the Center of Excellence of hospital management in Sri Lanka



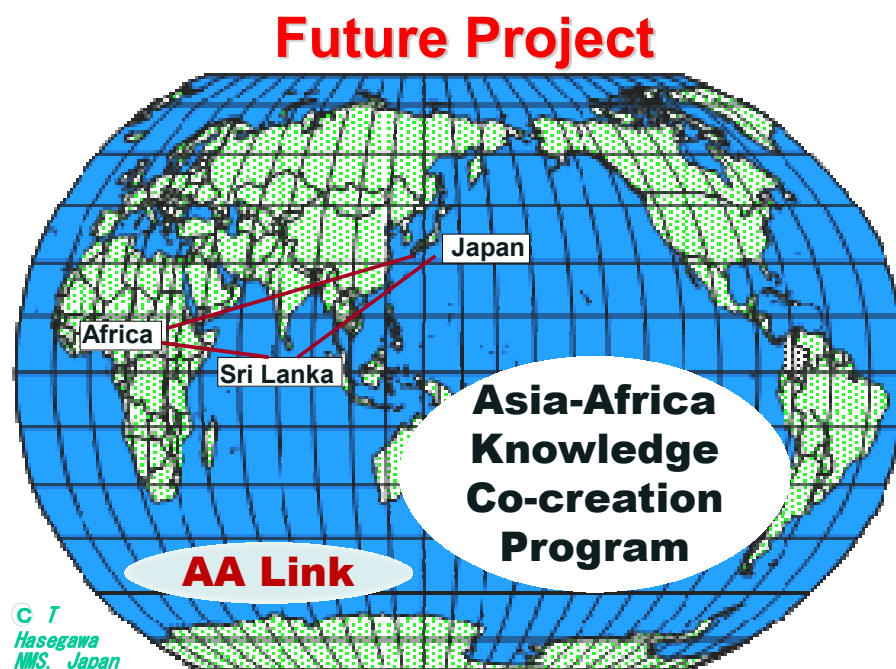
A new monumental project was started in 2007 based on the international research of TQM, conducted by Prof. Toshihiko Hasegawa and on the proposal for accommodating 5S-KAIZEN-TQM for hospitals to a formal JICA project, by Prof. Yujiro Handa, JICA advisor to Sri Lankan MOH (in 2001-2003).

A JICA's cooperation scheme of "Asia African Knowledge Co-creation Program (AAKCP)" was utilized to work on this topic related to hospital management. It aims to create new knowledge and future together with Asian and African people. In 2007, the 5S activities, as the first step out of 5S-KAIZEN-TQM stepwise approach, was applied to 8 African countries, Eritrea, Kenya, Tanzania, Madagascar, Malawi, Nigeria, Senegal and Uganda (AAKCP-Group 1).

At respective country, the 5S activities were, then, installed at each pilot hospital under the support of MOH and foreign experts. Getting the 5S activities well established at pilot hospital, the first phase of the project ended. The second phase was, thereafter, commenced in 2009 for disseminating 5S to the rest of the country and also to upgrade the pilot hospitals' practice stages from 5S to KAIZEN in all 8 countries.

Having the above ongoing program, a new additional program for another 7 countries, Benin, Burkina Faso, Burundi, Niger, Democratic Republic of Congo, Mali, Morocco (AAKCP-Group 2) was started from the first step of 5S installment to respective pilot hospital.

Currently 5S-KAIZEN-TQM for hospitals has been underway in altogether 15 African countries through AAKCP-Group 1 and 2. This new stepwise approach is not only developed and field tested in Sri Lanka but also successfully applied to many developing countries suffering from chronic shortage of health resources.



People are the one to change. The positive change should be realized in your work environment, work processes and the contents of the existing services toward further betterment. Confidence and positive mind-set of the workforces is the base of their active participation. The key to success for ensuring the active participation will be leadership both of middle and top management.

## I-3...5S-KAIZEN-TQM as a Methodology for Value Co-creation: Implications for New Health Services Management

### I-3-1...5S-KAIZEN-TQM

As mentioned above chapter, the combination of 5S (sort, set, shine, standardize and sustain), Kaizen (continuous improvement) and TQM (Total Quality Control) is originated in the operational management in Japanese manufacturing industry. However in recent years as the focus has been shifting from the traditional manufactures to the cutting-age emerging service providers, the objects of 5S-KAIZEN-TQM have inevitably been transferred to the value co-creation activities of service sector including health care and medical services.

These days 5S-KAIZEN-TQM seeks to work with various human activity systems, especially those of health services workplace, facilitating a systemic process of learning in which different viewpoints are discussed and accommodated in a manner that can lead to purposeful action in pursuit of, for instance, improved quality, safety and work environment. Besides these it is up to the intention of agents in any institutions to be purposeful in generating specific goals to meet their strategic requirements. Some institutions may put priority on increasing the degree of customer satisfaction, others on employee job satisfaction as a goal.

As shown Figure1-1, the objects of 5S activities focus on human activity systems involving products/goods, processes, services and the combinations thereof. In an attempt to organize those activities in a purposeful organizational behavior, it would be necessary for many institutions to introduce continuous improvement (Kaizen) in order to reframe those activities in such a manner as plan-do-check-act cycle. The concept and detailed description of 5S-KAIZEN-TQM will be addressed in Chapter Two.



Figure 1-1: 5S-KAIZEN-TQM

### I-3-2...Innovation and Kaizen

The term innovation derives from the Latin *innovatio*, the noun of action from the verb *innovare*, which in origin is a combination of “in” and “novare”. This means to renew or change. As such innovation by and large refers to the creation and diffusion of disruptive products, processes, services, technologies and ideas that affect socio-economical spheres including market, community and government. Thus innovation can be expressed as an underlying phenomenon which causes large scale and disruptive impact to societies.

Imai (Imai 1997) argues that “the word [Kaizen] implies improvement that involves everyone---both managers and workers---and entails relatively little expense. The Kaizen philosophy assumes that our way of life---be it our working life, our social life, our home life---should focus on constant-improvement efforts.” Kaizen or incremental change is apparently different from innovation. Kaizen is geared towards incremental change, alteration, transition, and transformation rather than disruptive changes or innovation.

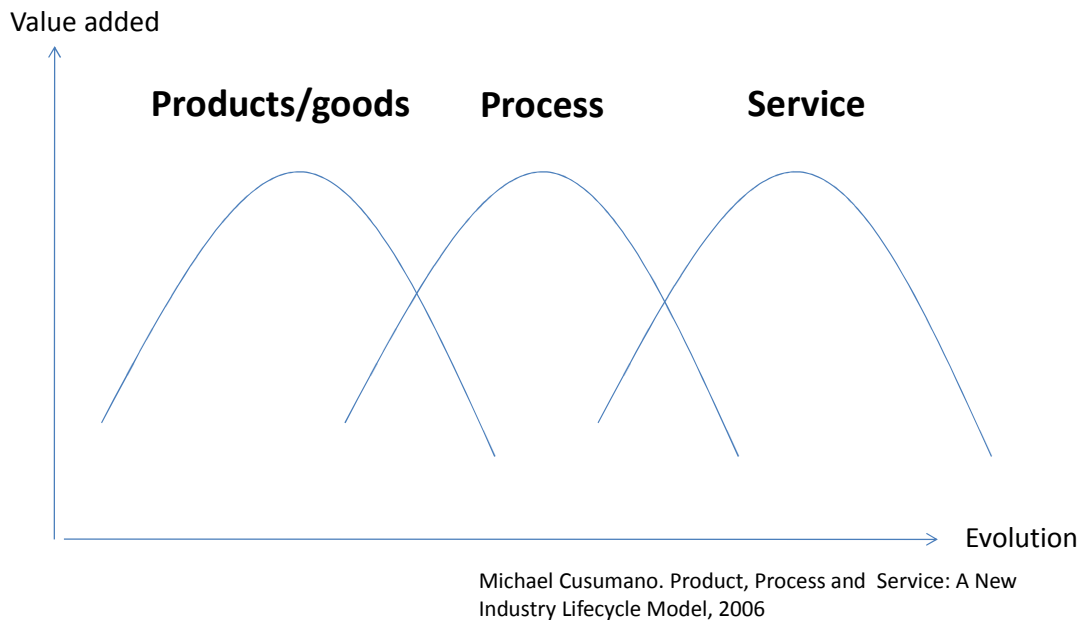
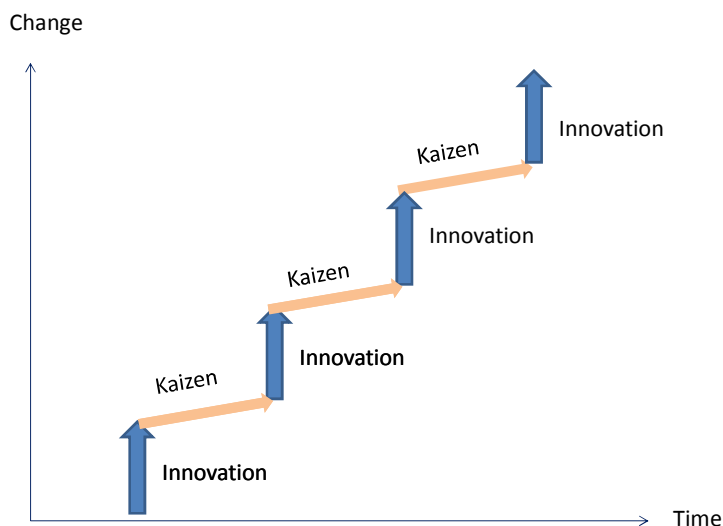


Figure 1-2: Innovation Life Cycle

The changes, regardless they are disruptive or incremental and large-scale or small-scale, tend to emerge in three evolutionary stages. Those include such phases as products/goods, processes and services. With servitization manifesting itself in various sectors, decision makers begin allocating and investing resources to realize changes in services offerings. These days, as a result, more attention is being paid to changes in service sectors which, needless to say, include health and medical services.



Source : Presentation prepared Karandagoda. Sri Lanka. 2011

Figure 1-3: KAIZEN and Innovation

The relationship between innovation and Kaizen is illustrated in the above Figure1-3. Innovation tends to bring about radical changes in short period of time, whereas Kaizen is inclined to generate incremental and gradual changes in a relatively longer period of time. Consequently Kaizen forms precondition of innovation. Innovation and Kaizen are not mutually exclusive phenomena but they are dependent when they are observed from a long term phenomenological point of view.

### I-3-3...Embedded Systemicity

KAIZEN-5S methodology and its underlying philosophy could bear the global universality which goes beyond the boundaries restricted by national, cultural and industrial boarders. I arguably assert that this nature derives from the embedded *systemicity* of 5S-KAIZEN-TQM methodology, of which system property constitutes three dimensions, i.e., 1) holistic and hierarchical, 2) communication and control, and 3) evolution. (Kijima and Jackson 2007)

#### (1) Holistic Changes

5S-KAIZEN-TQM is able to bring about holistic changes to each of the layers of the hierarchical structure of health services as illustrated Figure1-4. Many of the institutions including health and medical teams, subgroups, clinics, hospitals, medical centers, home care deliverers and community day care centers, to name just a few, interact with patients in order to co-create value through using such artifacts as medicine and medical device, human care and knowledge. As is explained and evidenced in the following chapters, numerous health care institutions have found 5S-KAIZEN-TQM efficient and effective for increasing not only levels of quality of care, safety, patient satisfaction, but also employees' job satisfaction. These cases are associated with such layers of patients, health services institutions and interaction.

These institutions on the other hand depend upon platform layer. Despite differences in health policy in countries, platform means the basic frame of a health care system's hardware and software, defining how health care institutions are operated and determining what kinds of resources can be allocated and utilized. Therefore platform, when it is appropriately aligned, enables health services institutions to transcend disciplinary boundaries towards developing new perspectives concerning with knowledge, human services and development and application of products/goods. Platform is largely restricted by healthcare base which constitutes of infrastructure, social capital, and social security systems.



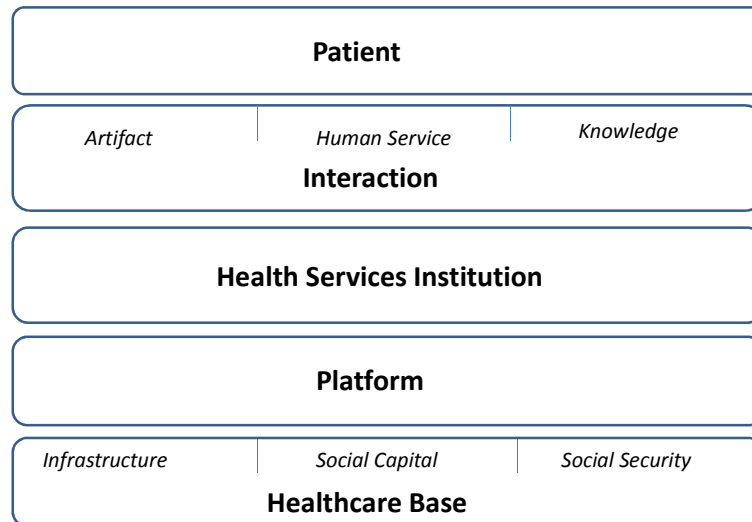


Figure 1-4: Hierarchical Structure of Health Service

Observing that the policy makers have officially introduced 5S-KAIZEN-TQM as a national health policy and that they have recognized its effectiveness in such counties as Tanzania and Democratic Republic of the Congo, this methodology has impact, if limitedly, on platform and healthcare base. Consequently KAIZEN-5S methodology has realized holistic changes directly or indirectly to the combination of each layer above.

(2) Communication and control

By introducing 5S-KAIZEN-TQM a number of institutions have reported the increased degree of communication, control and participation among them as shown in the chapters that follow. In an organizational context, learning occurs when a person is able to control their learning experiences and the persons sharing contents and contexts are able to communicate their learning experiences each other.

The concept of “community of practices” was first proposed by Lave and Wenger (Lave and Wenger 1991). It is through the process of sharing knowledge and experiences with the group that the members learn from each other, and have an opportunity to develop themselves personally and professionally.

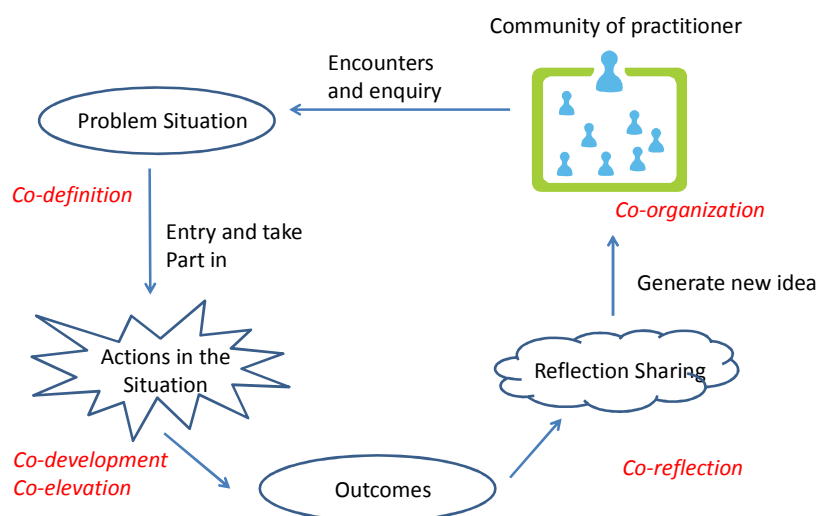


Figure 1-5: Value Co-creation in Action Research based Learning

Action research is a reflective process of progressive problem solving led by individuals working with others in teams or as part of a "community of practice" to improve the way they address issues and solve problems. The action research program that was established at Lancaster and yielded these early successes has since been used in hundreds of projects (Jackson 2003). An action research program, one of the representative approaches in soft systems methodologies, enables the co-creative circulation of interactions between cognition and experience (Kijima, 2007).

Figure 1-5 illustrates the co-creation flow of the PDCA action research-based learning. In getting PCDA cycle move forward practitioners are expected to co-define problem situation after encountering with the situation. Then they take part in actions in the problem situations by co-developing new relations and co-elevating solutions focusing on entity and agent. Following those steps each of the participants and the communities are able to share reflections (co-reflection) by evaluating the outcomes of their intervention. When this collective reflection is satisfactory enough, each members of community of practice are able to generate and obtain new ideas to further intervene the situations. By so doing community of practices is able to co-organize such operant resources as human resources, materials, money, knowledge and information, space and time (co-organization).

Consequently 5S-KAIZEN-TQM methodology enhances not only communication and control but also personal and transpersonal learning through recursive cycle consisting of co-definition of the problem situation, co-development and co-creation of solutions, co-reflection and co-organization of operant resources.

### (3) Evolution

Let us hereby assume the element of time to the above discussions. The process of learning in nature runs parallel with time. Learning occurs in a dynamic context, that is, learning, in the consideration of time series, can be expressed as a recursive movement between experience (practice) and idea (theory) through the processes of co-experience involving co-definition, co-development (relation-based), co-elevation (agent-based), co-reflection and co-organization as illustrated below.

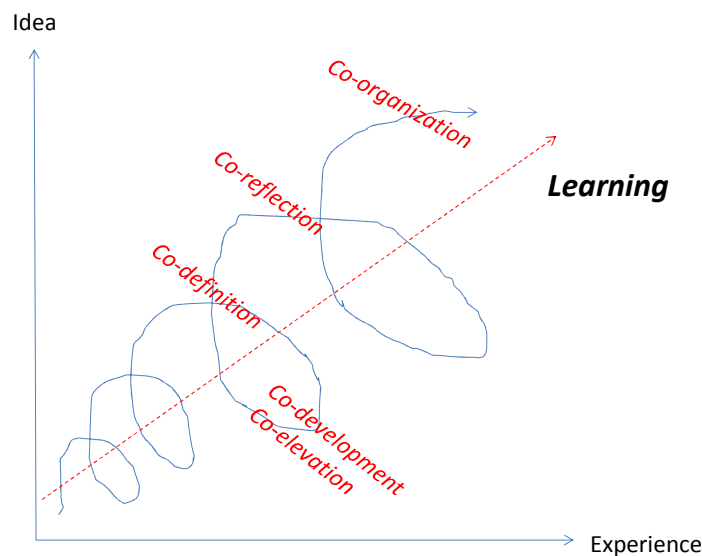


Figure 1-6: Evolutionary Learning based on 5S-KAIZEN

Situations where “the notion of ‘problem’ and a ‘solution’ are inappropriate, what makes more sense is a process of learning which is never-ending” (Chambers 1997). Therefore what is essential here is an “enquiry” in the part of practitioners when they encounter problematic situations rather than independent and contained problems ‘out there’. Never-ending but effective enquiry to grasp and describe the situations ensures the process of co-experience.

As is shown in the following chapters, successful practices of 5S-KAIZEN-TQM embed the learning processes coherently, where each of the participants acts as an actor to activate the recursive and evolutionary cycle between experience and idea.

### **I-3-4...Behind the PDCA Cycle**

The *systemic* changes realized by the movement have gained enthusiastic support from the ministers down to the staff members at hospitals and clinics in countryside in Africa. African people have even produced "5S-KAIZEN dance" and "5S-KAIZEN song" to encourage themselves to get this movement forward. Here a question is raised. Why are African people so enthusiastic about "5S-KAIZEN-TQM"? The author regards that what behind the scene drives plan-do-see-check cycle forward really matters.

#### **(1) Participation and inclusion**

The management ethos has been excluded in health services partly because of the poverty and inadequate education. Even stealing medicine or equipment is not rare in some parts of African countries. But 5S-KAIZEN-TQM approach has the effect of changing passive mind-set to proactive one. In particular, everyone can try the first three Ss or sort, set and shine on hand to easily visualize the outcomes. In this sense the participation in 5S-KAIZEN-TQM sets the easy but steady start line to introduce management ethos.

Social exclusion is a multidimensional process of progressive social rupture, detaching groups and individuals from social relations and institutions and preventing them from full participation in the normal, normatively prescribed activities of the society in which they live. (Silver 2007) On the other hand social inclusion, often being an agenda of debate, could be perceived as a set of actions to change the circumstances and habits that have led to social exclusion. When practiced within a certain institutional boundary, 5S-KAIZEN-TQM facilitates the processes of such actions as participation and inclusion within the social context relating the institutions.

#### **(2) Intrinsic Reward**

Most of the management methodologies and methods currently practiced in African countries have largely come from the West which historically had been exploiting the continent for decades. In those practices they try to give reward for individuals and organizations based on meritocracy, not to say carrot and stick. Those practices are based by and large on goal-seeking paradigm; they plan in advance the acted-out results of individuals, teams and organizations that should be achieved. When those are achieved, the incentives including monetary or subsidies, are to be awarded to those who achieve.

For those who are fed up with the conventional meritocracy or are sick and tired of such ways, the inner sense of fulfillment and accomplishment based on relation-seeking paradigm are perceived as intrinsic reward. 5S-KAIZEN-TQM coherently embeds readiness of stimulating intrinsic reward when it is appropriately introduced and carried out.

#### **(3) Solidarity**

"Ba", a Japanese word, means a place or field associated with human activities. According to Nonaka (Nonaka 1998), "Ba" can be thought of as a shared space for emerging relationships. This space can be physical, virtual, mental (eg. shared experiences, ideas, ideals) or any combination of them. "Ba" provides a platform for emerging relations and learning amongst the concerned.

"Ba" in work place is mentioned as "Gemba" in Japanese industry. What supports and integrates such "Gemba" as workplace and community of practice is the collective sense of solidarity which refers to the ties or integration in a micro society that bind persons to one another. When such sense of solidarity is enhanced through planning, doing, checking and doing actions based on 5S-KAIZEN-TQM, people can assure and even enrich solidarity at work places.

The PDCA cycle, when plausibly introduced and operated, helps the participants in 5S-KAIZEN-TQM realize participation in human activities related with health services. This leads to the increased level of cohesiveness and solidarity of members in workplace.

In agent-focused PDCA cycle as illustrated bellow, management tends to stimulate extrinsic rather than intrinsic motivation. In this model objectives are set on individual job content basis usually based on job descriptions written through the process of job analysis. Then “Do” phase tends to focus on individualistic performance of incumbents. Then “See” phase typically emphasizes short term appraisal of achievements which can be evaluated quantitatively. Consequently the results of appraisal are linked with extrinsic rewards including increased or decreased amounts of cash compensations or subsidies.

On the other hand, in relation-focused PDCA cycle, what relatively counts is intrinsic motivation rather than extrinsic. Here in “Plan” phase objectives are usually set on team basis rather than individual basis. In “Do” phase team rather than individual performance is monitored and cared by empowerment. Long-term team performance is consequently evaluated in “See” phase, where recognition of team rather than of individual plays a salient role to link with intrinsic motivation. Observing the good practices of 5S-KAIZEN-TQM in African countries, many of them have been successful by deploying intrinsic motivation model by effectively using relation-focused PDCA cycle.

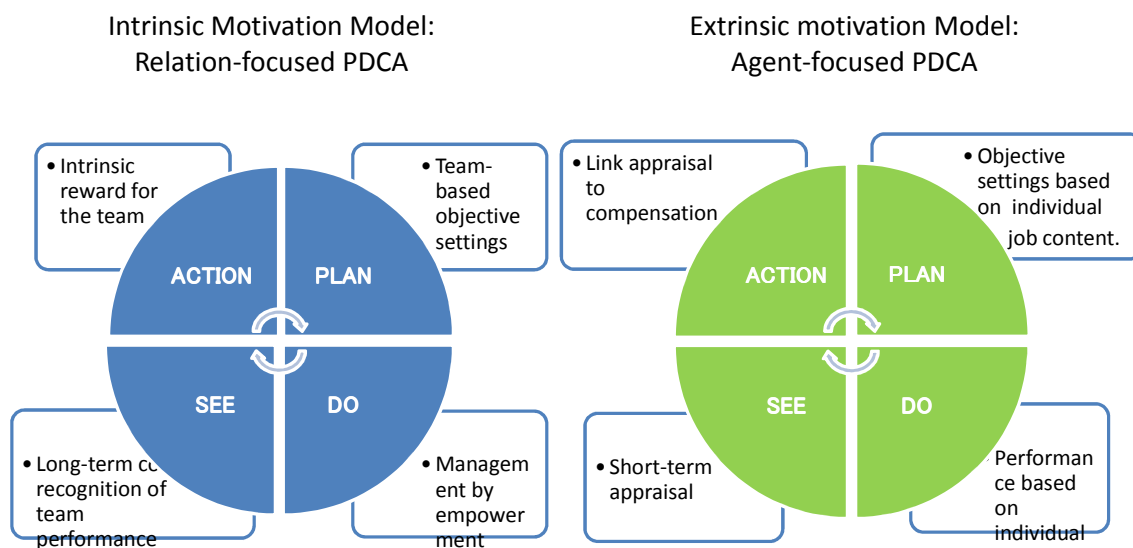


Figure 1-7: Motivation Models and Two Models of PDCA Cycle

### I-3-5...Towards value co-creating organization

The goal of 5S-KAIZEN-TQM is not just install 5S or KAIZEN programs into hospitals, but to change organizational culture, management style, and learning style of all who are concerned with hospitals. Health and medical care services should be balanced on such aspects as process, structure, outcomes and patient-centeredness. Among others safety and quality are of essential feature. Responsiveness, resilience and equity are the core issues to be addressed in pursuing patient-centeredness. To achieve these it would be salient for those concerned to employ participatory and inclusive approach. Regardless the positions and roles, full participation based on equal-partner spirit by the employees should be encouraged and respected. By so doing the accumulation of tiny bit of small successes will lead to a fundamental change and triumph in the future. So a hospital will be transformed from “only existing organization” to “value co-creating organization”.

## II...Basic Concept

### II-1...Why “hop-step-jump”, three-step in 5S-KAIZEN-TQM?

In developing world, people complain of lack of resources at public sector hospitals. Yes, it is true that in the case of war or disaster, the resources can be absolutely absent. However, in peace, if you walk around the hospitals and meet the staff in various work venues, you will be able to find certain resources, which can be still utilized. What is really lacking is “Positive mind-set” and “Leadership” of the people, which are the sources of “change” and “innovation” in routine hospital services.

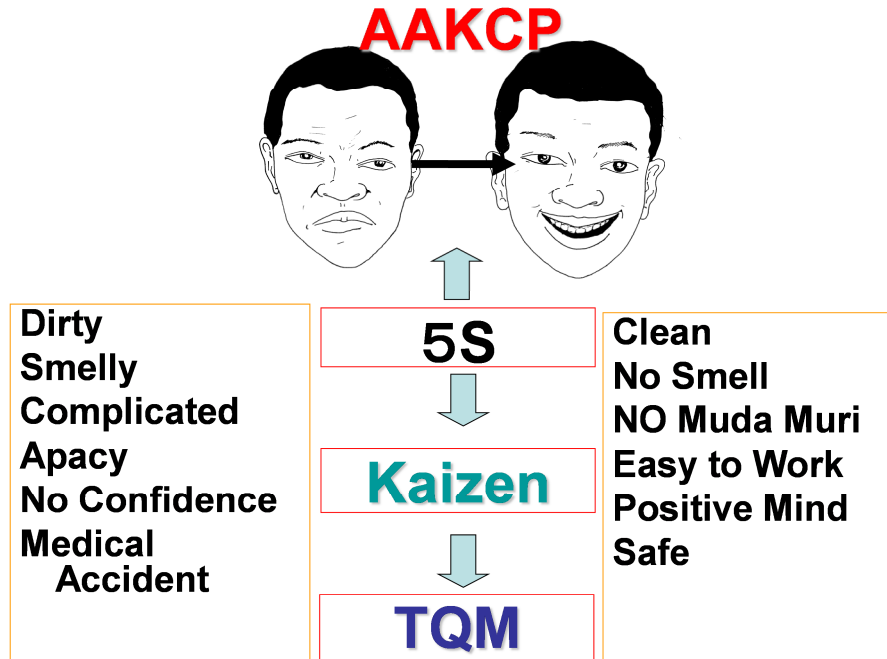


Figure 2-1: Management Change

People, then, may ask you how one could create the mentioned “Positive Mindset” and “Leadership” under the limited resources. Before raising this question, you should know that the resources in most countries, including developed countries, are, in fact, chronically limited. Based upon this recognition, we should know that there is a secret wisdom to make maximal use of those limited resources. This wisdom is the new participatory stepwise approach of “5S-KAIZEN-TQM”, upon which you are now touching through reading this book.

If you make your hospital active in quality improvement, you need a trigger and also a big push for the kick-off the change. Every staff, regardless the rank and category, knows importance of safety and quality of care. No medical staff wants to provide patient care with low efficiency and quality. The staff wants to avoid medical accident and seriously think about patient safety. But they don’t know the practical way to initiate and implement patient safety movement in the hospital. Even they may not be in physical environment to tackle this important objective. So they may fall into a vicious cycle. But the staff can achieve something tangible, if you, top management of the hospital get to know how to initiate challenge in managerial improvement. And thereafter, you can obtain a positive feedback cycle not falling into a vicious cycle.

Currently, there is awareness in the world on the quality of care initiated by World Health Organization (WHO). In general public, there is consciousness based on the human right to receive good care in health services. Maturity of the technology leads the health care system to

standardization. It is obvious that those recognitions have been spread even to remote rural areas of developing world. Taking care of the sick and the injured is a professional joy and duty for qualified health personnel. Quality of care should be well considered in every venue of the health care. But because of the unwanted vicious cycle, health staffs were, sometimes, enforced to forget ethics and equity issues on patient care.

Because of the unfavourable working environment, health staffs may make some technical mistakes or even they may deal patients badly without patient-centredness. The professional interests on taking care of patients are often lost in the health staffs. In case, many staffs work with a hope to resign the positions and move to developed countries just for better salary. So-called “brain drain” already begins to grow in the venue of routine work in every corner of the hospital.

The “change management” is, therefore, needed as a breakthrough in the mentioned managerial constraints. Change is mandatory to create a situation, where the staffs try to meet the patient demand and to respect the code of ethics in health care. Also, tangible change in management is necessary, if the health authorities expect improvement in job satisfaction, which is highly influential to staff retention. In relation to that, innovations in management practice are required to stimulate the employees for self-reliant problem-solving in every work venue. Navigating the journey through 5S and KAIZEN heading to TQM is a mandate for top and middle managers with special care to strengthen capacities of all sorts of the workforces. Careful and meticulous tuning is definitely needed for sustaining positive and upward spiral in quality improvement. As the starting point, the staffs have to be well motivated in changing the work environment, where there are inconveniences and shortcomings. And they gradually start to seek the improvement of service contents and the work processes.

## **II-2...Process and Framework toward Total Quality Management (TQM)**

For developing Three-step-activities, the organizational structure and necessary trainings at each step are described below.

### **II-2-1...Conceptual frame work of 5S-KAIZEN-TQM approach**

Each institution has to contribute to good health for people. “Health System Strengthening” is one of the mandates of health ministry, especially securing “responsiveness”. In this textbook, “Responsiveness” is defined as “duties for health authorities and also for hospital authorities to realize so-called “patient centeredness”. In connection to this concept, hospitals should take an active role in strengthening health system through the processes in improving products / services and enhancing patient satisfaction and employee satisfaction.

The goal of 5S-KAZEN-TQM approach is to make all hospitals “Value-Co-Creating Organizations”. The three values, which should be created by the hospitals are not always countable monetary values but non-monetary values related to (1) products (= various hospital services including medical services), (2) customer satisfaction and (3) employee satisfaction. The last and important value, employee satisfaction has been handled, in the former time, only as a measure in creating other two values, products and customer satisfaction. Now the employee satisfaction at hospitals should be presented as a tangible value to the customers and the communities in the catchment area. If health staffs with enhanced professional satisfaction level are serving to the patients and visitors of government sector hospitals, the society will respect and cherish them as model places. Employee satisfaction is therefore an important value.

The three values, mentioned above, should be continuingly created by the hospitals. For that purpose, the creation process should be shared by all employees. In addition to that, involving customers is an

essential way of thinking. As you know well, you will not be able to accomplish the goal of health care without sharing common objective among care-providers and patients. This context is widely recognized in hospitality industry. It is possible to state that the values created by the service-providers are endorsed to the clients in return to their active participation to the processes in health services. If we consider this situation, where a care-providers and a patient should work together for achieving problem-solving in health through medical service in a hospital, we find that the two parties are both constituents of a team sharing a common objective. For achieving objectives in health services, the team should elaborate in establishing trust and communication. It is also important for the team to maintain good motivation toward the positive outcomes.

Management is not a simple work. In business sector, it is said that by incorrect management, a corporate will have a serious condition endangering the employment. Government sector is not an exception. Although government sector health institutes are not supposed to fall in bankrupts, they will have stagnation in investment by the higher authorities if the managerial activities are not well organized. Then, in the vicious cycle, a public hospital with miss-management will have deterioration both of physical facility and efficiency / quality of services.

At least seven (7) managerial targets should be in mind-set of executive management team including hospital director for maintaining co-creation of three values. These are as follows.

- Productivity.....Maximal use of the limited resources
- Quality.....Maintaining standards of services with patients-centredness
- Cost.....Control of expenditure
- Delivery of services.....Efficiency in service provision
- Safety.....Avoiding mistakes and risks in services
- Morale.....Realizing highly motivated team and teamwork
- Moral.....Establishing work ethics

The above targets are variables that independently fluctuate time to time. The top management and his or her executive management team have to seek the best suited condition where the variables are in balance. Also they have to give proper prioritization in investment both of time and resources according to the urgent demands in target achievement.

Among the 7 targets, “Quality” is highlighted as the symbol of participatory management. Total Quality Management (TQM) is the condition, where the top management and executive managers group can make high level management decisions with maximal use of the information and evidences sent from the work frontline conducting self-reliant problem-solving (KAIZEN). As the results of continuing intra-organizational KAIZEN activities, resources and work methods are well organized in the optimal condition. We may imagine the situation, where human resources are nicely in place, the hardware is well maintained, and the consumables are in smooth logistic process. In addition to those matters, various work methods at every work unit of the hospital become lean and are properly described and shared among the staffs.

The staffs should be organized as teams. Without team, no one work efficiently and effectively. Each team should equip capacities for adoptable service provision, communication with customer and commitment to the allocated tasks. Adoptable service means optimal products / services for the customer created by maximal use of existing resources. The values of products /services are able to be measured by the seven management targets; productivity, quality, cost control, delivery, safety, morale and moral.

Five-S Principles are the foundation of the pyramid of management, by which we can work on 5S-KAIZEN-TQM approach. Under the approach, all staffs have to be managers in their allocated work environment and work processes. Small successes in work environment improvement provide

new experience and knowledge in the team. The team is, then, become capable to tackle issues related to process and system. In order to set the focus of the team to the work environment, initial target of the 5S activities should be related to physical environment in the work venue.

Through the process of 5S activities, we have to challenge to formulate capable teams all over the organization. Without teamwork, no one cannot achieve problem-solving on site by the staffs for the staffs and for the clients in the hospital. Creating “Highly Motivated Team”, 3Ss (Sort, Set, Shine) activities are useful to cultivate capacity of the team. If the 3Ss is conducted in a standardized manner, the team members are all experience small successes in environment improvement. Those activities are called “Habit Formation”, because of the potentiality in actual habit change of the involved staffs. Leadership of the team leader and followership of the members are obviously important in guiding the members and navigating the process of the work. Peer groups in the hospital also necessary to maintain both the collaborative and competitive atmosphere in the activities. Healthy competitions among good rivals are stimulated their spirits to create innovations. Positive attitude is an essential principle for this approach and also for the entire framework

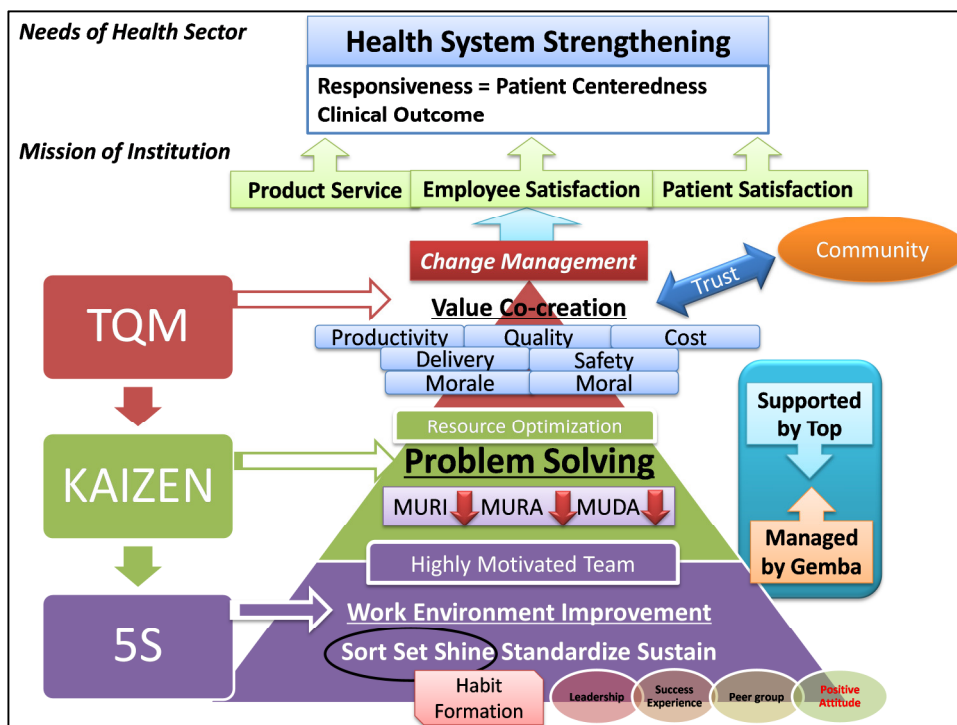


Figure 2-2: Management Pyramid

## II-2-2...Important three steps and two tracks toward quality health services

The most important feature of the long process to achieve quality health services is described with clearly distinguished three steps and two tracks in the following figure. The steps are, as repeatedly mentioned in the previous portion of the chapter;

- Step 1.....Work environment improvement by 5S activities
- Step 2.....KAIZEN activities for participatory problems solving in the service front
- Step 3.....TQM as an approach to make maximal use of the capacity of the entire organization



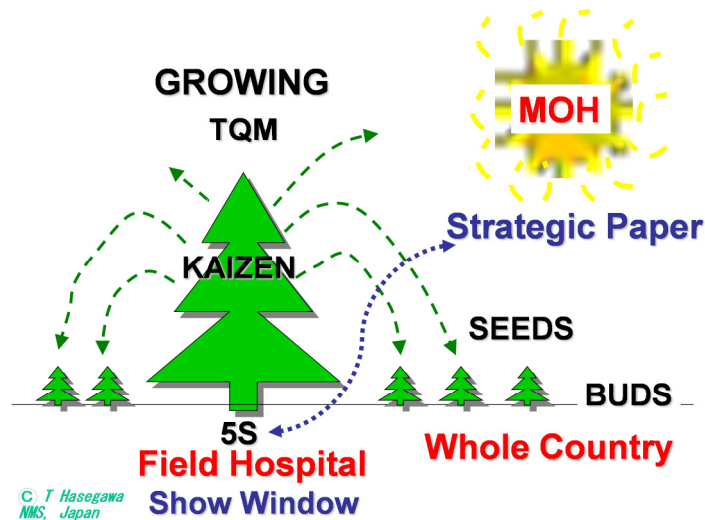


Figure 2-3: TQM Tree 1

The growth of the above TQM tree realized through advancing the three steps of 5S- KAIZEN-TQM is the first track, which should be followed to make the Center of excellence and a show window for the entire country. The regulatory authority, like MOH of a country, should initially support the pilot hospital and, thereafter, disseminate the success and acquired knowledge of this Center of excellence to the rest of the country through proper strategic guidelines / paper. This way of doing by the health authority is namely the second track. Nationwide quality improvement in health services can be firstly achieved only after the collaboration is tangibly functioned between the track one and the second track.

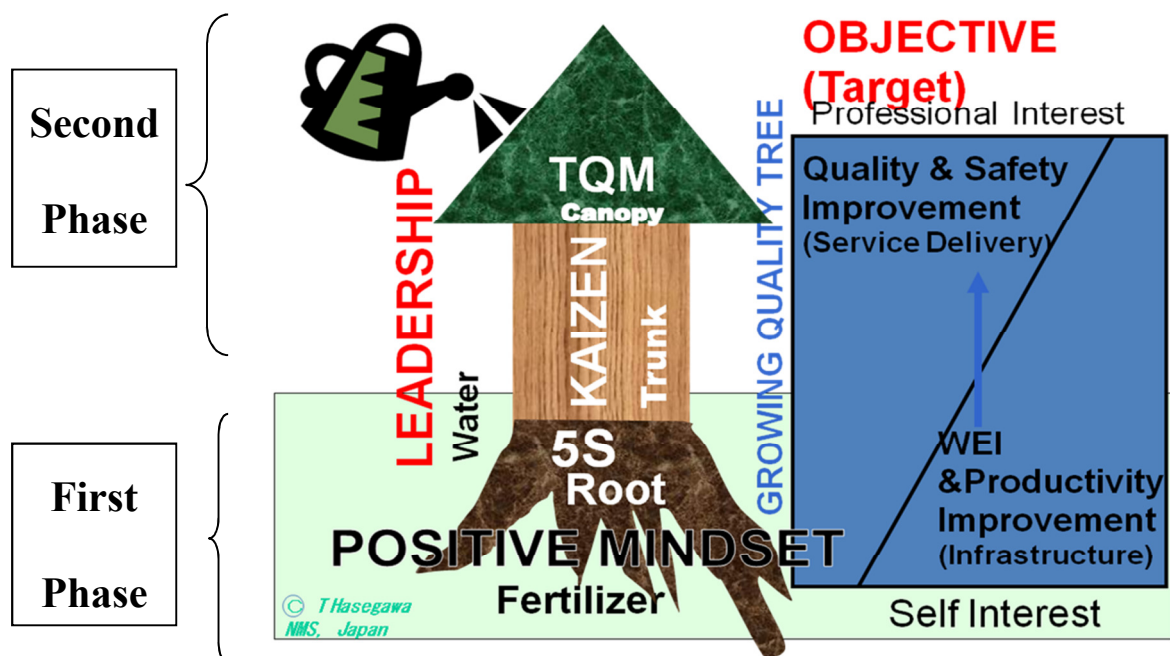


Figure 2-4: TQM Tree 2

During initial 5S step (Step 1), the main focus is Work Environment Improvement (WEI) ensuring the productivity improvement of organization / hospital. Then the target is gradually shifted to the improvement of quality / safety and, thereafter, to the realization of TQM.

For that purpose, it is important to motivate workers in the beginning, through self-interests, such as work efficiency or orderliness of their work environment, not to jump up to quality assurance of specific technical areas. Only after they become interested in the process and outcome of 5S activities, hospital staffs, serving in the front-lines, appreciate the result of WEI. Thereafter, gradually their interests shift from the environment to more professional areas such as “Quality and Safety”.

“Positive Mind-set” is considered as fertilizer and “Strong Leadership” is considered as water. Those are essential to growth of the “Quality Tree”, which was schematically described in the above Figure2-4.

A specific organizational structure for promoting 5S activities should be created in every work unit in a health facility, where WEI should be a part of routine managerial activities. Formulation of Work Improvement Team (WIT) at every work unit should be promoted through top-down initiative through incubating staff who had potential as a WIT leader and training basic 5S to the staff. WEI is an intra-unit small group, consisted of selected unit members, and is expected to lead 5S activities at each venue as a participatory activity for reducing inconveniences. At the initial stage of 5S-KAIZEN-TQM approach, WIT is not established formally. Top management as steering team of the approach has to support voluntary staff to establish informal WIT and to attend basic 5S training.

Based upon the said function of WIT and continuing 5S activities, the stage of KAIZEN will be practiced as a mode of problem-solving mainly of the work processes. The focus in this stage will be shifted from capacity strengthening of WIT members to empowerment of the middle level managers, such as team leaders of clinical units, laboratories, and nursing professionals. In TQM stage, where challenge is done, by the top management, to accumulate multiple KAIZEN outcomes for macro-level investment control, the focus will be eventually further shifted to the capacity strengthening of the top management, such as hospital director, chief administrator and their deputies.

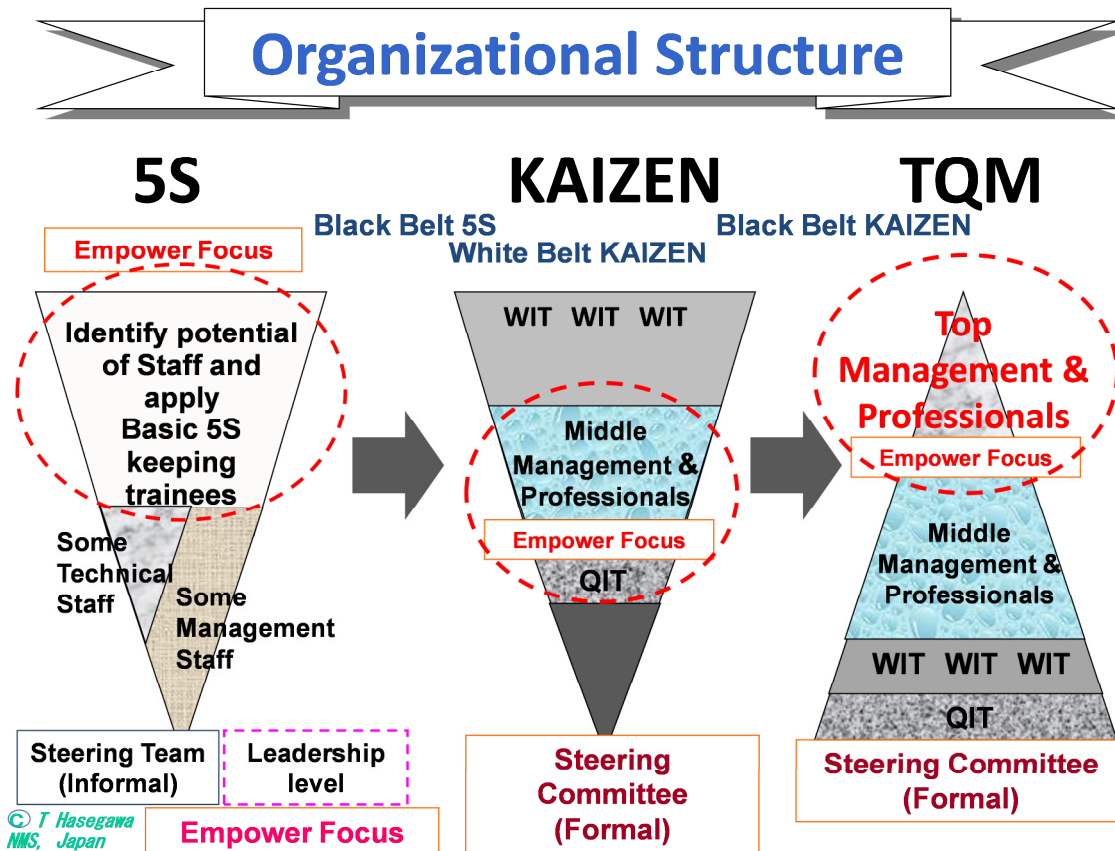


Figure 2-5: Organizational Structure

Training focus should be same as the leadership focus. Initially motivated work unit members should be trained on 5S activities, particularly for the initial 3S, *Seiri (sort)*, *Seiton (Set)* and *Seisou (Shine)*, of 5S steps. But, when they proceed into 4<sup>th</sup> and 5<sup>th</sup> steps, *Seiketsu (Standardize)* and *Shitsuke (sustain)*, of 5S, they have to be trained through coaching on pro-active and on more detailed skills for systematizing their activities. In KAIZEN step, on the other hand, formal training should be conducted for middle level managers on problem-solving processes and handling evidences. The training should, of course, be extended to the whole organization, since organization-wide KAIZEN implementation is the way toward TQM.

### II-2-3...Implementation Protocol and Intervention

In national level, there are two levels for installation of 5S-KAIZEN-TQM approach. Level 1 is “Pilot” and it aims to identify the effectiveness of the approach and to create strategies for dissemination of the approach to the whole country. After getting exposure of the approach, the focal persons in health authorities in charge of the approach have to select the pilot facilities to install the approach. Practice in the selected pilot hospitals shall be monitored carefully in consideration to justify the strategies for dissemination of the approach. For the dissemination, mechanism should be established for training and monitoring within the administrative structure of the ministry.

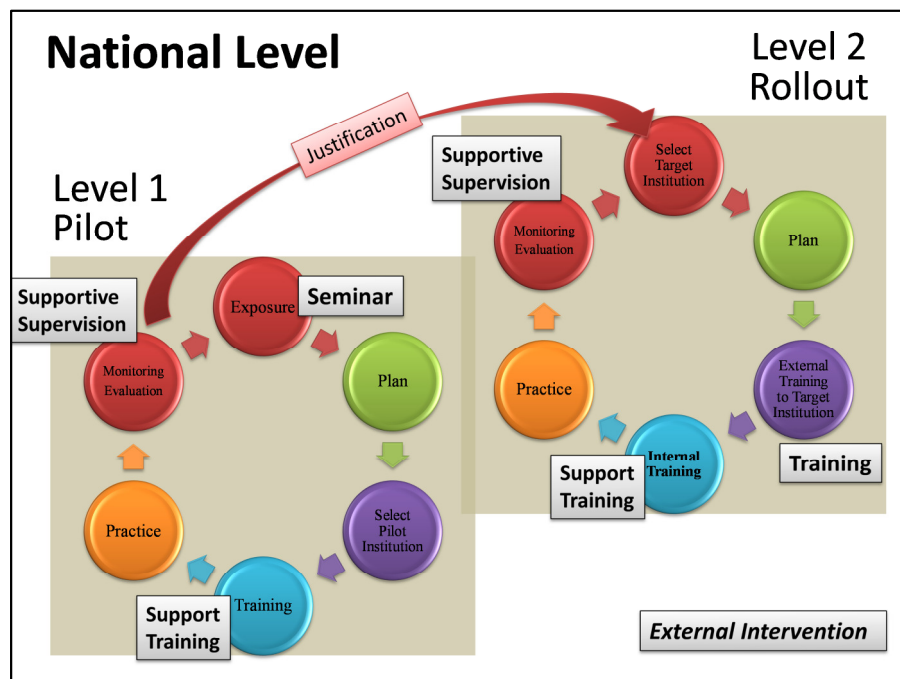


Figure 2-6: National level

For smooth implementation of the approach, the key to success is adequate and timely intervention by experienced coach and/or supervisor. Continuing spiral upward process of “Exposure”, “Planning”, “Internal Training”, Implementation”, and “Monitoring” should be outlined and followed both by the coach and the learners (actors) at hospitals regardless the size and position in the ladder of health service provision.

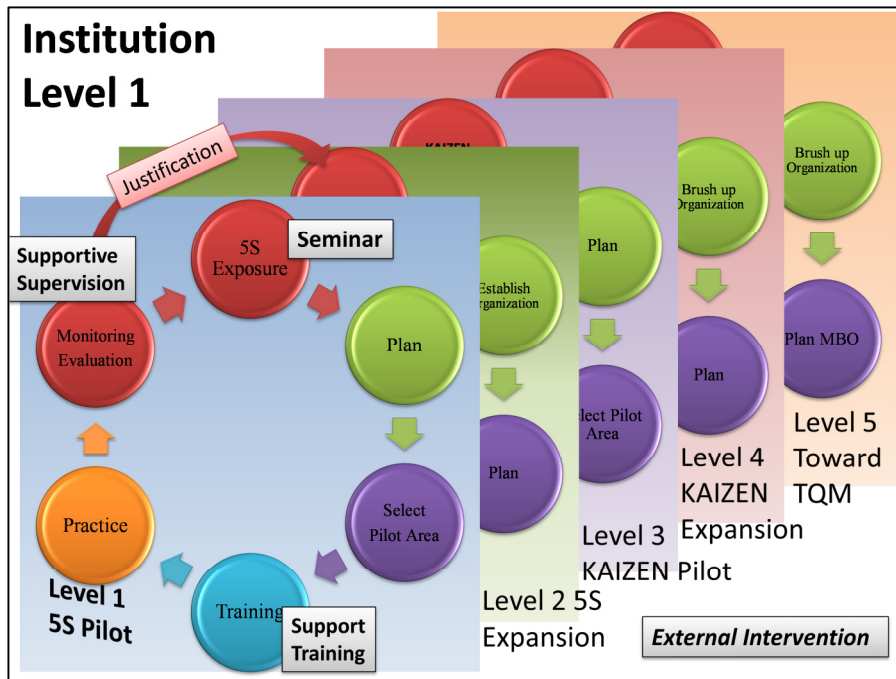


Figure 2-7: Institution level 1

As repeatedly mentioned above, the entry point of the inter-organizational movement is 5S activities conducted at selected pilot areas within the hospital. The activity is then expanded to all work units of the hospital. If the practice of 5S is nicely standardized all over the organization, KAIZEN can be attempted by again the selected pilot areas, where 5S activities were successfully in place. As 5S expanded, KAIZEN, too, have to be expanded to all over the hospital. You will, thereafter, encounter the situation, where all work units or divisions improved their work environment as the results of continuing activities of 5S and KAIZEN, teamwork for problem-solving on the work processes / systems by the staffs for the staffs and for the patients, is actively carried out at majority of work units.

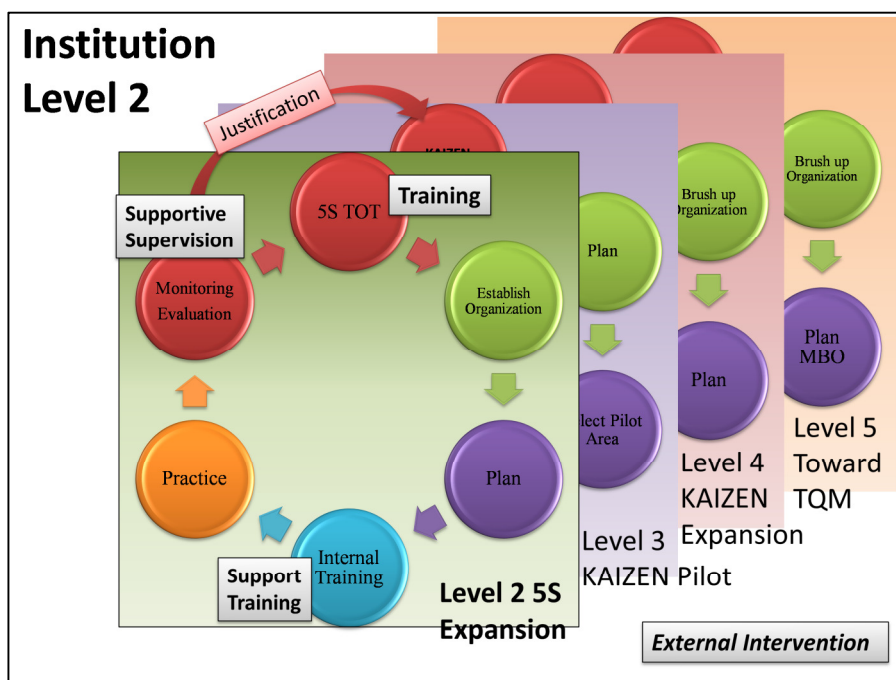


Figure 2-8: Institution level 2

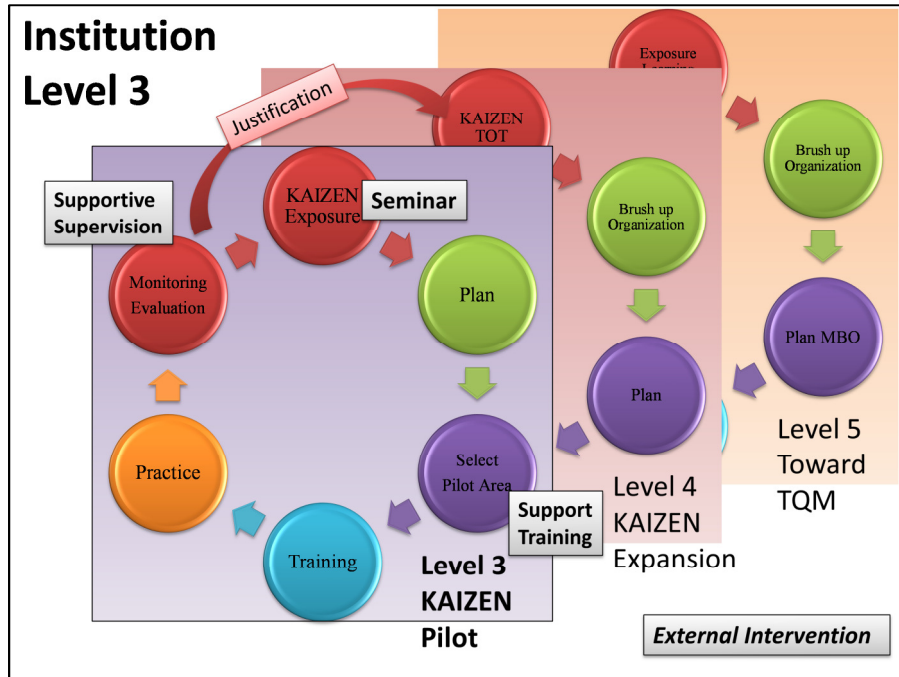


Figure 2-9: Institution level 3

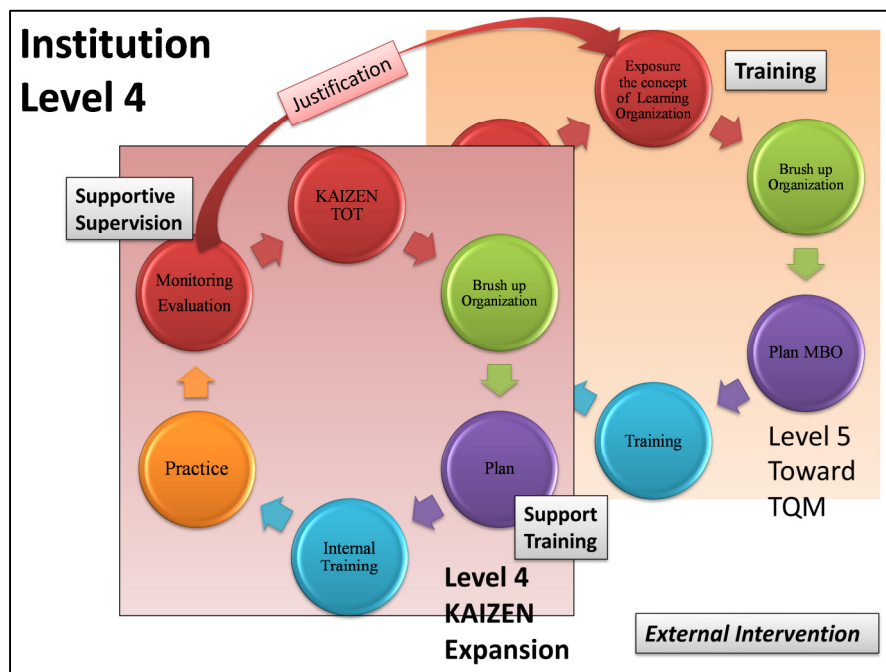


Figure 2-10: Institution level 4

The top management and executive management team of the hospital are, then, mobilize the existing “Management Information System” and collect information and evidences from the lean system and the outcomes. The reliability of the information is, thereon, improved. Based on this condition, decision-making made by the top management comes to be more and more meaningful and rational. The top-down and bottom-up reciprocation of managerial activities with continuity are defined as Total Quality Management (TQM), which is characterized with active participation of the employees regardless the rank and categories.



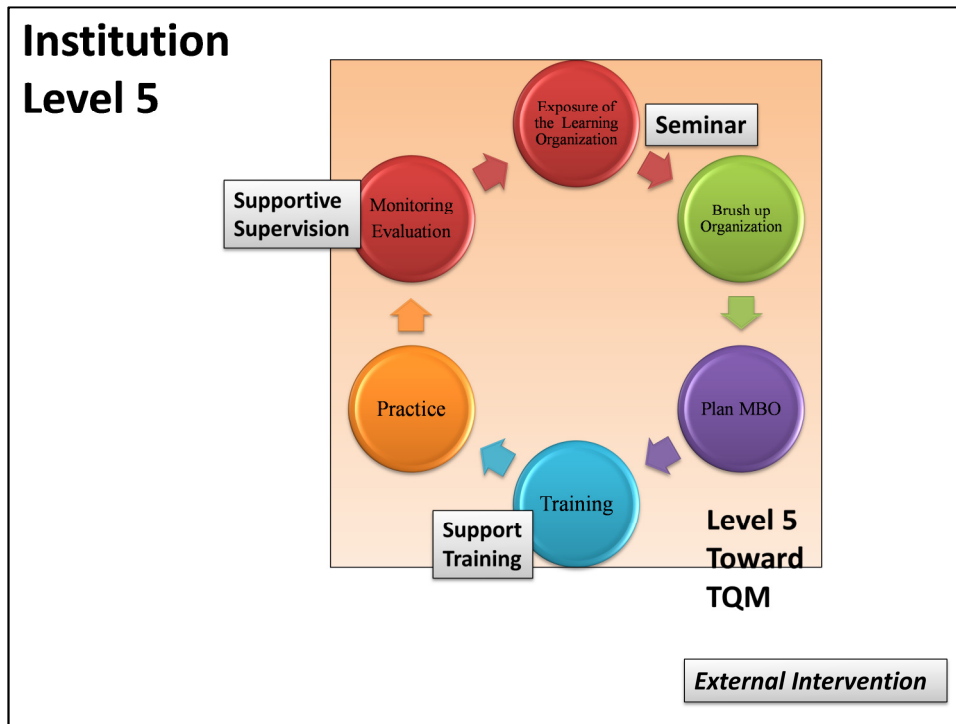


Figure 2-11: Institution level 5

On and off Interventions are necessary to each phase of the above-mentioned activities, if the top management seek the organizational development. Training employees are mandatory for realizing participatory management using 5S-KAIZEN-TQM.

Training by external trainers is utilized, as the first step, to provide the employees a good exposure to the principles, tools, system and the implementation process. The hospital authority may send a few selected staffs to the training courses being conducted outside of the hospitals. In the training, the intervenient consider how to attract the attention and interests of targeted persons to 5S-KAIZEN-TQM approach. Various examples of 5S-KAIZEN activities conducted to handle topics, which are familiar to the audience, are effective in delivering messages within the short time in seminars.

For group training courses for different segments in hospital staff, the trained trainers in the hospital by external trainers are expected to organize everything with assistance of dispatched facilitator or trainer from outside organization if available. Implementation of the training course of 5S-KAIZEN-TQM is also important element of participatory management.

Supervision should be inevitably “supportive” to the work units conducting 5S and KAIZEN. It can be normally done by middle class managers related to Quality Improvement Team (QIT). Supervision is a process to share knowledge on sequence of the work and technical matters among supervisor and the work unit members. Managers in charge of supervision should visit the work venues in the possible frequent opportunities for teaching and guiding the team for solving the existing unfavourable conditions. Praising the work unit members before pointing out shortcomings and mistakes is an essential attitude of supervisors. Also he or she should be alert in finding opportunities for coaching.

## II-2-4...Step 1: Work Environment Improvement (WEI) through 5S activities at each work place

Five (5) S is derived from the Japanese words “Seiri”, “Seiton”, “Seiso”, “Seiketsu”, and “Shitsuke”. In English the 5S are described as “Sort”, “Set”, “Shine”, “Standardize”, and “Sustain”. The sequence of 5S focuses on effective work place organization and standardized work procedures.



Figure 2-12: 5S

### II-2-4-1...Leadership in 5S activities

Leadership is a mode of team building and managing work team under the achievable objective setting. Unity of the team as a bundle of various roles should be achieved by means of leader’s formal and informal care for respective team member through communication with supportive attitude.

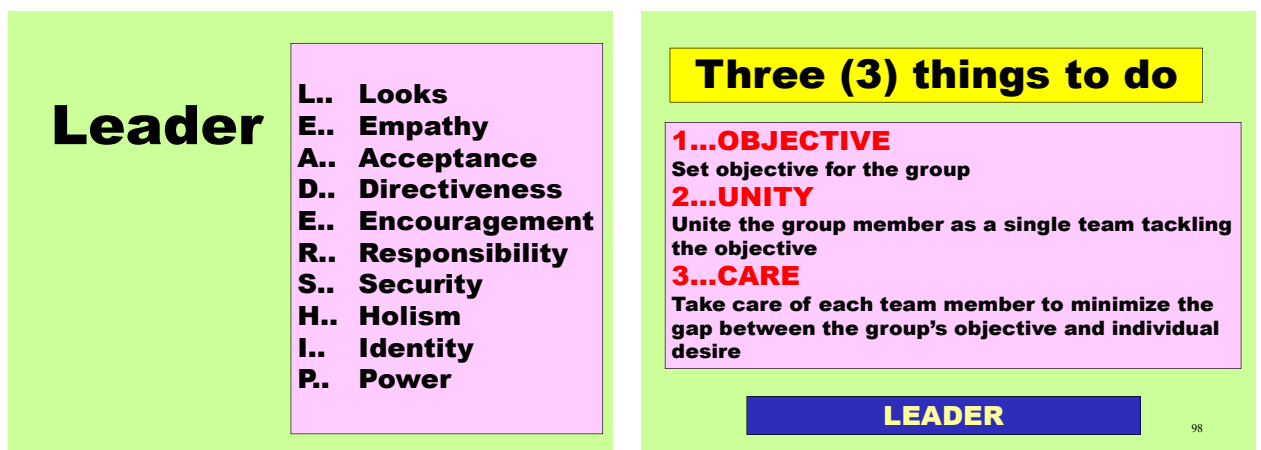


Figure 2-13: Leadership

Top down initiative with proper leadership is essential to implant this participatory approach for work environment improvement. Top management should make clear announcement that 5S Principles are applied to the whole areas of the organization. Middle level leaders’ role is vital in this process, since the activity center is in each work venue. Responding to the top management’s initiative, the middle level managers, such as unit chiefs or heads of departments, should be well motivated through timely conducted short exposure seminars.

Leadership of individual WIT members and other work unit members can be promoted through their exposure to a short seminar introducing 5S activities and the effects. Workload reduction, stress release and comfortable amenity for the staffs can be emphasized as the effects of 5S. Small individual leadership can be consequently created, if the exposure seminar is effective and the staffs have small attempts to improve their work territories.

## II-2-4-2...Organization for 5S activities

Five (5) S activities should be conducted as a group work. WIT is the essential work group for 5S activities. You cannot guarantee the stable operation of 5S without WIT, small group of work unit members, which promote WEI for reducing unnecessary workload and inconveniences.

In 5S activities, initial target should be on physical environment, because most factors related to work efficiency and productivity can be based on logistics and the function in the backyard services. Due to this nature, it is important to confirm that WIT is formulated in all work units of the hospital including units related to backyard and logistics services. Of course, administrative sections should also be included.

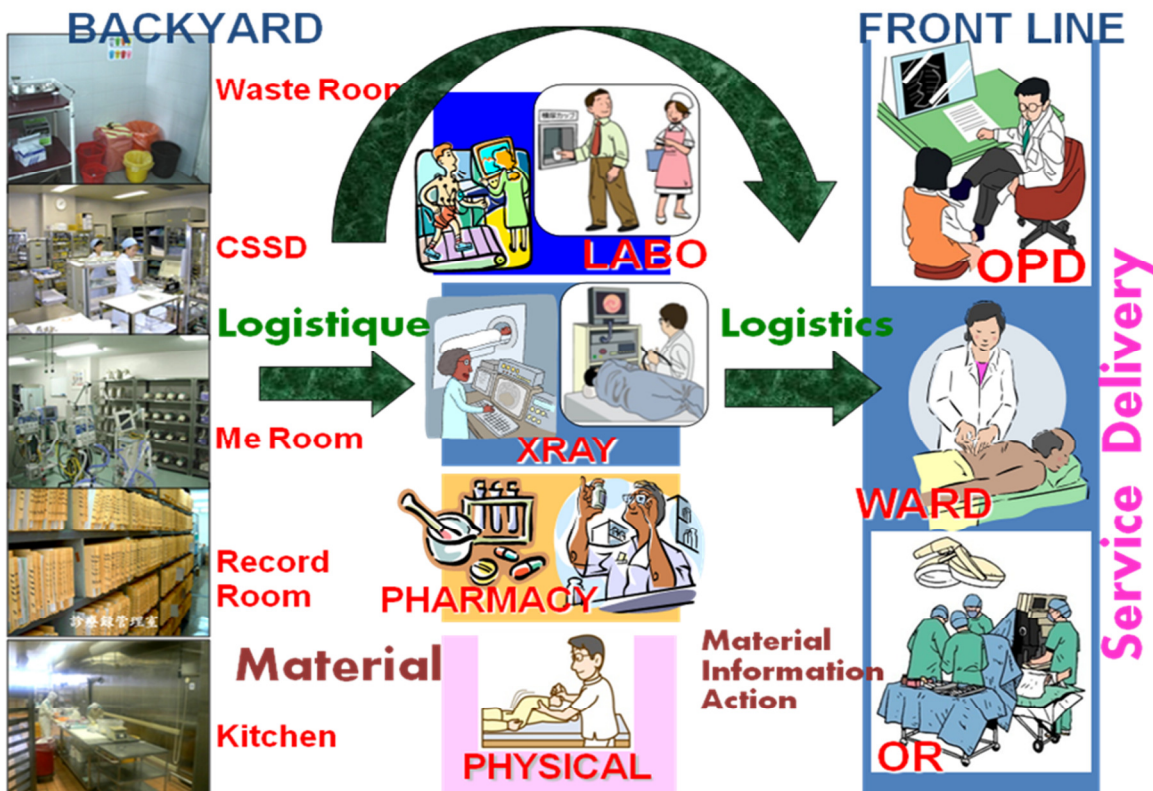


Figure 2-14: Backyard and front line of hospital

Improvement of logistic and backyard of the hospital can lessen the burden of service delivery area at the frontline, where staffs are directly face to face to clients and patients. They can, therewith, focus on their professional jobs in a better working condition. WIT's function and willingness to work on 5S is crucially important to harmonize the work environment with inter-unit communication for smooth collaboration in complicated patient care and the backup services.



# Organizational Structure 5S

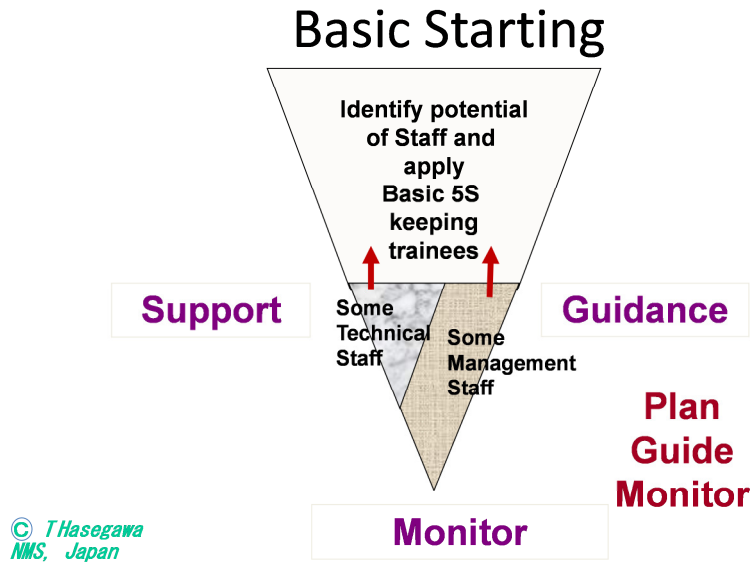


Figure 2-15: Organizational Structure 5S

Initial step of 5S is to incubate candidates for WIT leader, who have positive way of thinking, motivation, passion and capability to be a brigade between the team members. Then WIT will be established by the leader with the team members who have same thought as the leader. In addition to that, some technical staff and management will assemble informal quality team to support active WITs to make them successful teams, which can be demonstrable show cases of WIT activities. Their successes can be immediately shown up for the rest of the hospital with strategic thinking for the activity extension.

# Organizational Structure 5S

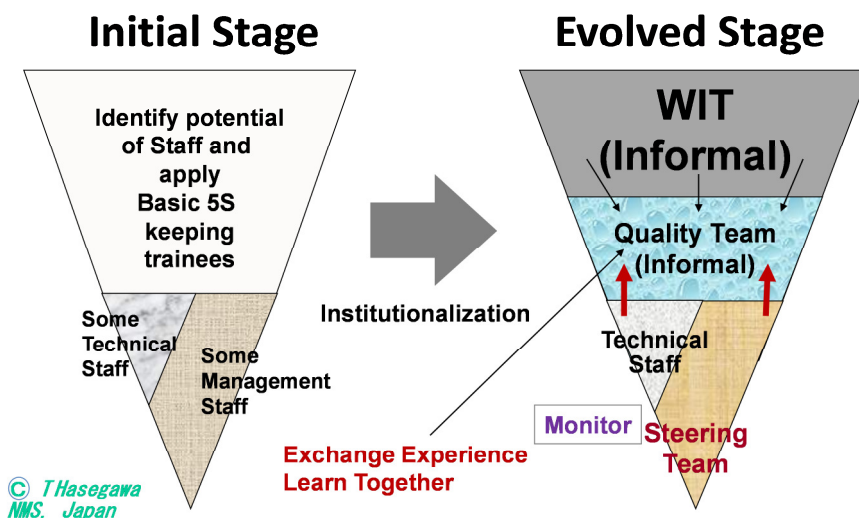


Figure 2-16: 5S to KAIZEN (Organizational Structure)

### II-2-4-3...Training on 5S activities

Training focus should be same as the leadership focus. Initially motivated worker should be trained on the job for 5S, particularly for the white-belt 5S (*Sort, Set and Shine*), the first 3 steps of 5S activities. When the work unit members proceed into the 4<sup>th</sup> and 5<sup>th</sup> step of 5S, they have to be trained through coaching on proactive and also for more detailed skills related to WEI. In KAIZEN, however, a formal training on problem solving processes with relevant tools should be conducted specifically for the middle managers (team leaders of various work units in the hospital). The training for the middle managers should, thereafter, be spread to the whole organization in order that KAIZEN becomes a part of routine managerial conducts throughout the organization.

For the training of 5S activities, selected members of the WIT should be trained on the actual jobs in conducting 5S. *Sort-Set-Shine* steps are easy to understand for everyone and also easy to implement throughout the hospital, wherever the venue is.

Advancement of 5S activities to so-called Black Belt 5S (*Standardize and Sustain*) is much more challenging than the White belt steps of *Sort-Set-Shine*. Detailed skills and techniques have to be taught to the member of WIT. It is true that coaching is needed to conduct the Black Belt 5S and bluish-up the White belt ones.

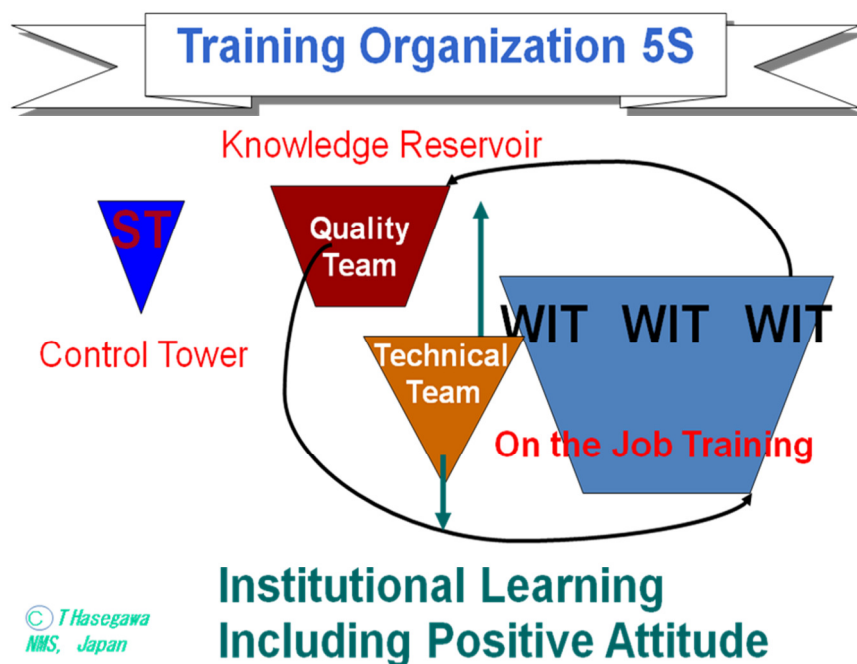


Figure 2-17: Training Organization 5S

### II-2-4-4...From White Belt 5S to Black Belt 5S

After the successful implementation of 5S, *Sort-Set-Shine* should be standardized throughout the organization and sustained for further improvement through well-targeted continuing education for the entire workforces. Otherwise the activities would be hampered by the visible set-back to the situation before the commencement of 5S. It is, therefore, important to maintain complete set of those activities for installing WEI-sensitive culture in the organization. This can be realized in the process of the above-mentioned period of Black Belt 5S. The transition period from White belt to Black belt is, definitely, a useful springboard to KAIZEN, an essential process of problem-solving by the staffs, for the staffs, for the quality of services and for the potential client satisfaction.

## Quality House of Dr Karandagoda

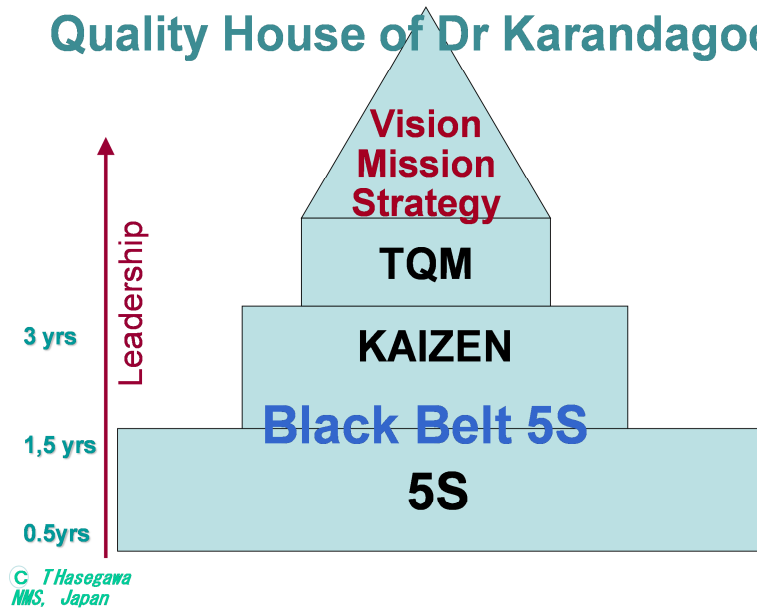


Figure 2-18: Quality House of Dr. Karandagoda

Since KAIZEN should be continuous and also need passion of the WIT members and other staffs, positive way of thinking and logicity, which are both essential in problem-solving, should be prepared through the Black belt 5S activities. The WEI targets are relatively simple and visible to every workforce. Due to those reasons, WIT and other workforces concentrate the jobs and learn how to observe their work venue and detect problems, to which they can tackle for the betterment of work process. The passion together with the positive attitude can be naturally implanted in the Black Belt 5S activities, if the team is guided by WIT and the WIT is properly supervised by the superior body, such as Quality Improvement Team (QIT).

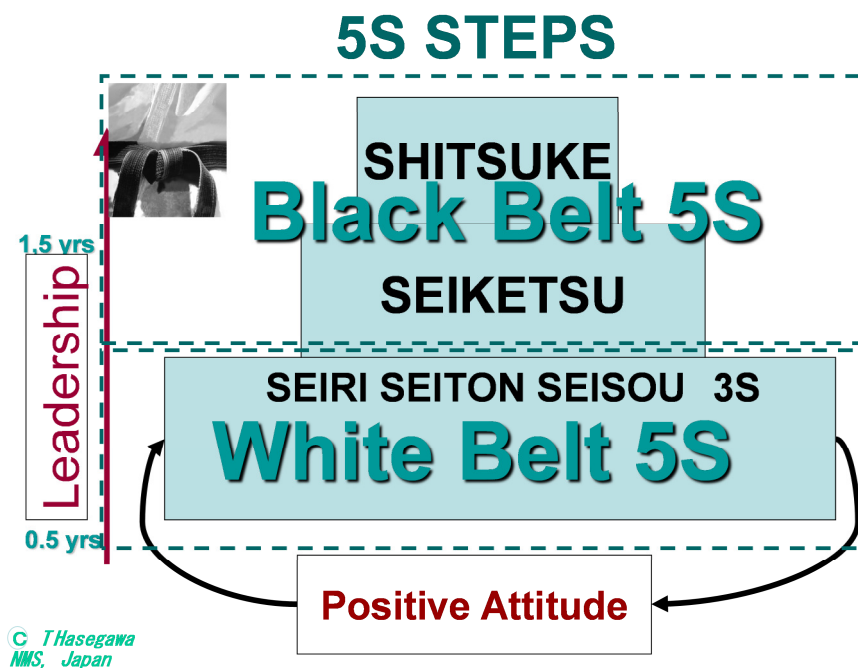


Figure 2-19: 5S Steps

## II-2-5...KAIZEN Phase, an improvement of work process and contents of services through participatory problem solving

### II-2-5-1... Leadership in KAIZEN

Leadership of work unit leaders, particularly of WIT leaders, is the most vital determinant factor in success of KAIZEN process, although it is obvious that leadership in all level of administrative ladder is necessary. For the top management, creation of middle level leadership is a life-threatening matter for the organization. For the middle managers, strengthening capacity of his or her team is the main focus in using leadership. By doing that, the team leader in every work unit, promotes team work, particularly with brain-storming in detecting 3Ms (Muri; Irrelevance, Muda; Waste, and Mura: Irregularity), which will be targets of problem solving.

Origin of the term, KAIZEN is a Japanese word implying "Change for the better" or "Improvement". In management, it, generally, means "continuous cost reduction" and "improving quality and safety" by reducing delivery time. As mentioned above, KAIZEN is a team-based improvement activity, in which every process can and should be continually monitored and improved. Nobody knows everything but everybody knows something. Working together as a team minimizes the weakness of individual and enhances the strength of each individual as well as the team. If KAIZEN is applied to a workplace, the activity on site comes to be a process for continuous improvement involving everyone regardless the difference in position or rank, manager or worker. KAIZEN is originated in manufacturing sector but now not limited to manufacturing systems only. It can be applied to service industry including health care.

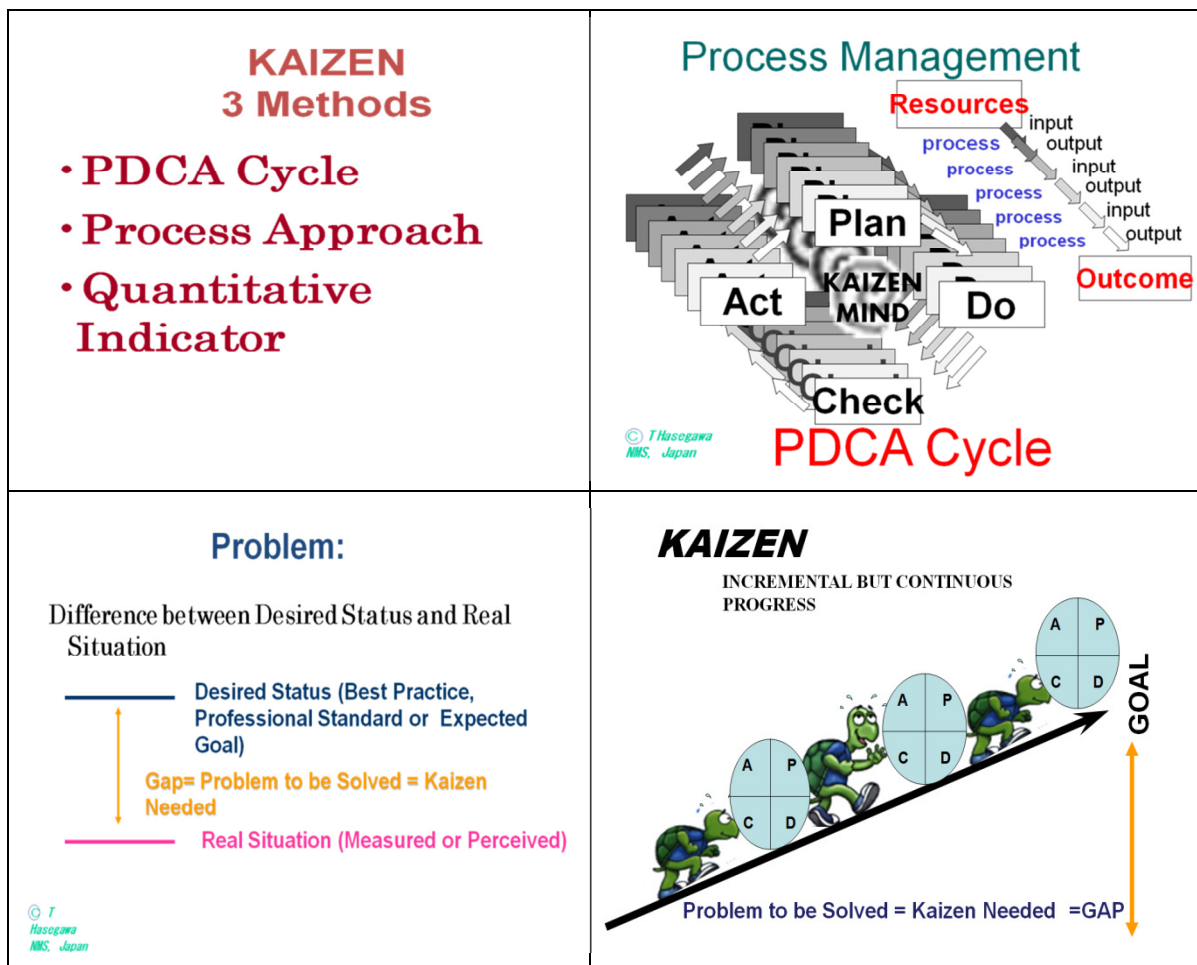


Figure 2-20: KAIZEN 3 Methods

KAIZEN is, obviously, a method to solve problem as repeatedly stated above. The problem, here, is defined as "the gap between ideal status and existing status". To solve the problem is to fill the gap continuously. We all have to "plan" to solve the problem, "Do" to fill the gap, "Check" to measure the gap, still existing and "Act" to improve further. Rotating this P-D-C-A cycle, continuously, is the most basic method for KAIZEN.

## II-2-5-2... Organization for KAIZEN

In teams of organizational structure for KAIZEN, the focus has to be shifted from forefront workers to middle manager. Since problem has to be identified, measured and monitored qualitatively or quantitatively at KAIZEN stage, importance of direction and leadership is specifically emphasized not at the forefront level, not at the top level but at the middle manger level, where the managers have to be in charge of the work forefront.

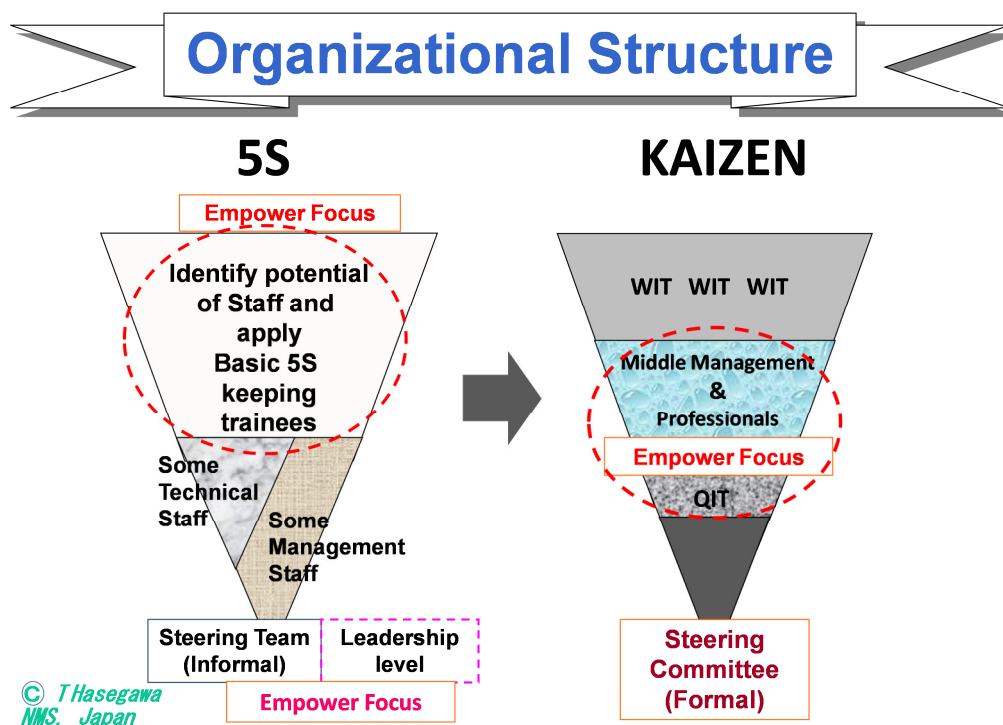


Figure 2-21: Organizational Structure

## II-2-5-3... Training on KAIZEN

The training on KAIZEN requires not only On the Job Training (OJT) but also formal training. The details of problem solving method have to be learnt particularly by the middle managers, which should be facilitators in detecting problems and the solution measures through team approach followed by each work unit. Various techniques to assess, to measure and to monitor the problem and to gather information related to the problem solving process are all to be acquired both in OJT and the formal training. Leadership and the creating positive mind set are other important interpersonal skills for the middle managers. In KAIZEN stage, the dedication of QIT and the overseeing steering committee become important further after completing building up WITs' network in entire organization with paying attention to the performance of WIT leaders. Having workable WITs and the continuing KAIZEN activities, which are extended to the entire organization, the hospital will be able to reach the higher goal to manage the organization by TQM.

# Training for KAIZEN

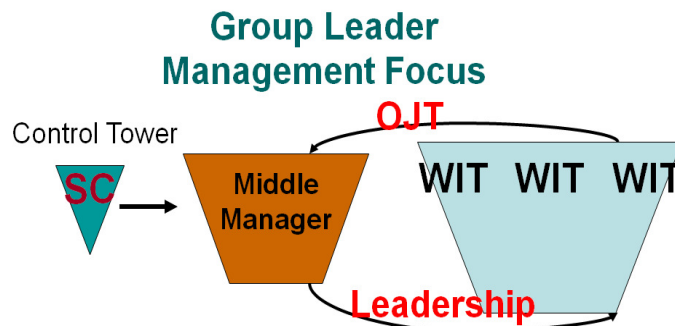


Figure 2-22: Training for KAIZEN

## II-2-6...From KAIZEN to TQM

In ISO8402 (ISO: International Organization of Standardization), definition of Total Quality Management (TQM) is described as follows.

*“Management approach of an organization, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society.”*

From the above definition, TQM should be characterized as a visionary and strategic leadership working with goal-oriented team. In the context of health facilities, the ultimate motivation toward continuing improvement is to create self-interests of the employees and to strengthen their professional attitude serving better for patients. To ensure "Just in Time" and "Mistake Proofing (POKAYOKE)" as essential parts of every routine work in service provision are real targets in uplifting managerial status from the KAIZEN, which is conducted in respective work unit as a bottom-up managerial activities, to TQM, which is conducted as bi-lateral managerial control among different level in the administrative ladder. The top management is specifically required to make evidence-based decision on resource control and investment. The evidences with reliable quality are, of course, obtainable from QIT, which is responsible in data analysis in collaboration with managers in all level. The data are produced out of routine KAIZEN activities conducted by all WITs.



Figure 2-23: Growing Quality Tree



## II-3...Navigation through 3 steps (5S-KAIZEN-TQM) processes using change management: Team building and KAIZEN

According to the "change theory" of Lewin, an institution has to go through unfreezing. It will go to the step of changing and finally has to go decreasing. It is important to have some triggers for unfreezing. The trigger should evolve the sense of urgency and needs for change. Generally speaking, health workers may have difficulty to realize their professional goals in case that they have problems in quality and safety. They can, however, easily understand that work environment have various problems and, thereafter, start to think of those problems to be parts of the ground causes of the visible problems in the services. If they make challenges in solving the problems of their work environment, they should regain some confidence through the small successes, on which they experience within relatively short time. They should be assured that they can do it by their capacities.

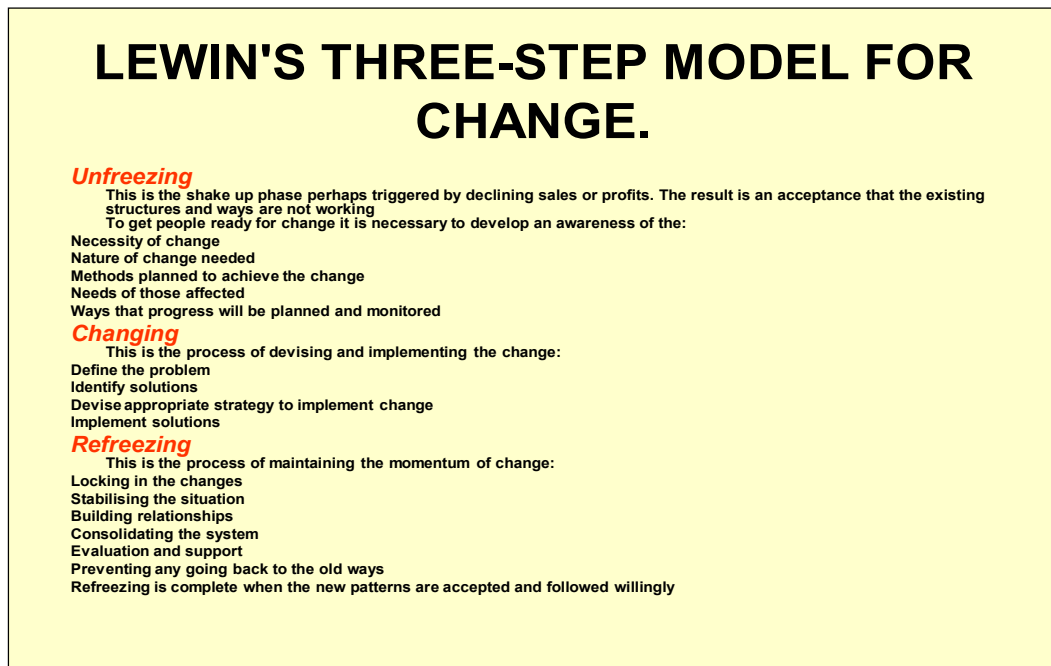


Figure 2-24: Lewin's Three-Step Model for Change

At the end, this change of the work environment should be sustainable. Based on this recognition, entry points for 5S activities and these targets should be carefully chosen. WITs should be, thereon, carefully navigated through the first 3 steps of *Sort*, *Set* and *Shine* for ensuring the entire 5S activities for change and confidence creation with sharing feeling of success among the workforce involved. The White Belt 5S activities are the ground work to have successful processes of 4<sup>th</sup> and 5<sup>th</sup> steps of 5S, where the work environment can be steadily maintained with systematic approach after extension and systematization.

One or two pilot work units may firstly show the success in improving work environment. After confirming the success, those successful units are ready to go on their team work in KAIZEN phase. Strengthening capacity of WIT was achieved through 5S activities. If the number of successful WITs is in increase, those WITs must share same experiences and views in terms of the role of work environment in the routine work and the workload. Through interactions among WITs, it is highly expected that the whole organization can share the same vision. It is theoretically possible to make macro and micro management in a coherent manner among different level of managerial ladder

Characteristics of the highly motivated team can be defined with the facts, such as self-identification as a part of team by each member, designation of roles / decision-making power to the members, intense communication among the members, shared outcome, and trust. Team building can only be

done through leadership. Setting achievable and practical objective of the team, making the team strong bundle of different roles and continuing individual care to all team member by the leader are the triad tasks of the leader in using his or her leadership. For trust building, in particular, intra-team and inter-member communication is the essential basis. Team members should initially be connected by informal relationship only. They, however, become more assured each other as members of one united team after establishing inter-personal trust. Finally, the strengthened team becomes a formal component of the organization.

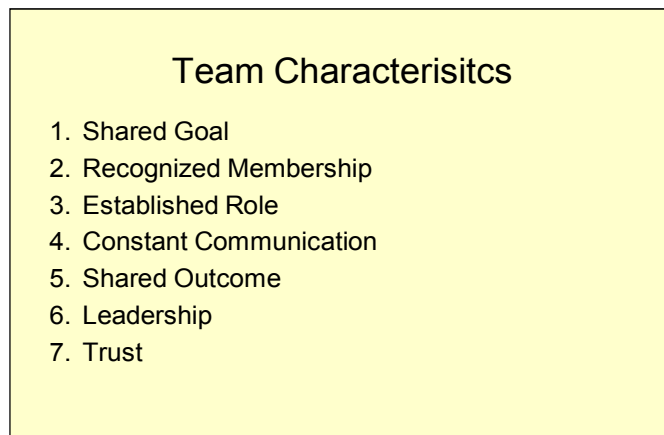


Figure 2-25: Team Characteristics

KAIZEN is a very process of formalization. Middle managers are designated to service creation and/or delivery processes, which are conducted by the front-line work units. Those units are already cultivated various capabilities through WEI using 5S Principles. Now middle managers leading WITs can be properly guided by QIT. WITs led by empowered team leaders can initially start qualitative method of measurement in implementation of KAIZEN process. They can uplift their activities steadily from Black Belt 5S to KAIZEN in a step by step way. There is no need to jump to formal quantitative target setting and measurement approach using rigid indicators in the initial part of KAIZEN.

Various tools to identify and measure problems are available. It is also useful to learn methods in collecting information, analyzing causes / effects and developing measures for solution during the KAIZEN processes, which might become a part of routine work for each work unit in hospitals together with 5S. WITs and other staffs can make maximal use of those KAIZEN tools and methods for the ongoing 5S activities for blushing up each step and also for stepping up from White to Black Belt 5S.

All of the above-mentioned processes are properly supervised by the top management in the forefront. After introduction of 5S by top down initiative, the activities can be implemented with workforces' initiative both at backyard and service front-lines. Middle managers' leadership is the key to success.

The final goal of 5S-KAIZEN-TQM is to change the hospital toward "Value Creating Organization". The value means the improvement of clinical indicators, patient satisfaction and employee satisfaction as processional, which are measurable using various indicators and enhance the presence of the hospital. On the other hand, the first tangible progress of the approach is to vitalize the change in work environment and in organization culture, with which the personnel seek continuing improvement of quality of services. For ensuring the above changes, "Positive attitude" and "Leadership" of hospital personnel, regardless the categories and ranks are the key issues, which should be elaborated by top management group of hospitals as well as the ministerial level decision-makers. Once these topics are adopted in right places of policy, it is possible to revive the whole organization to be health facilities delivering quality services focusing on more equitable patient centered care.



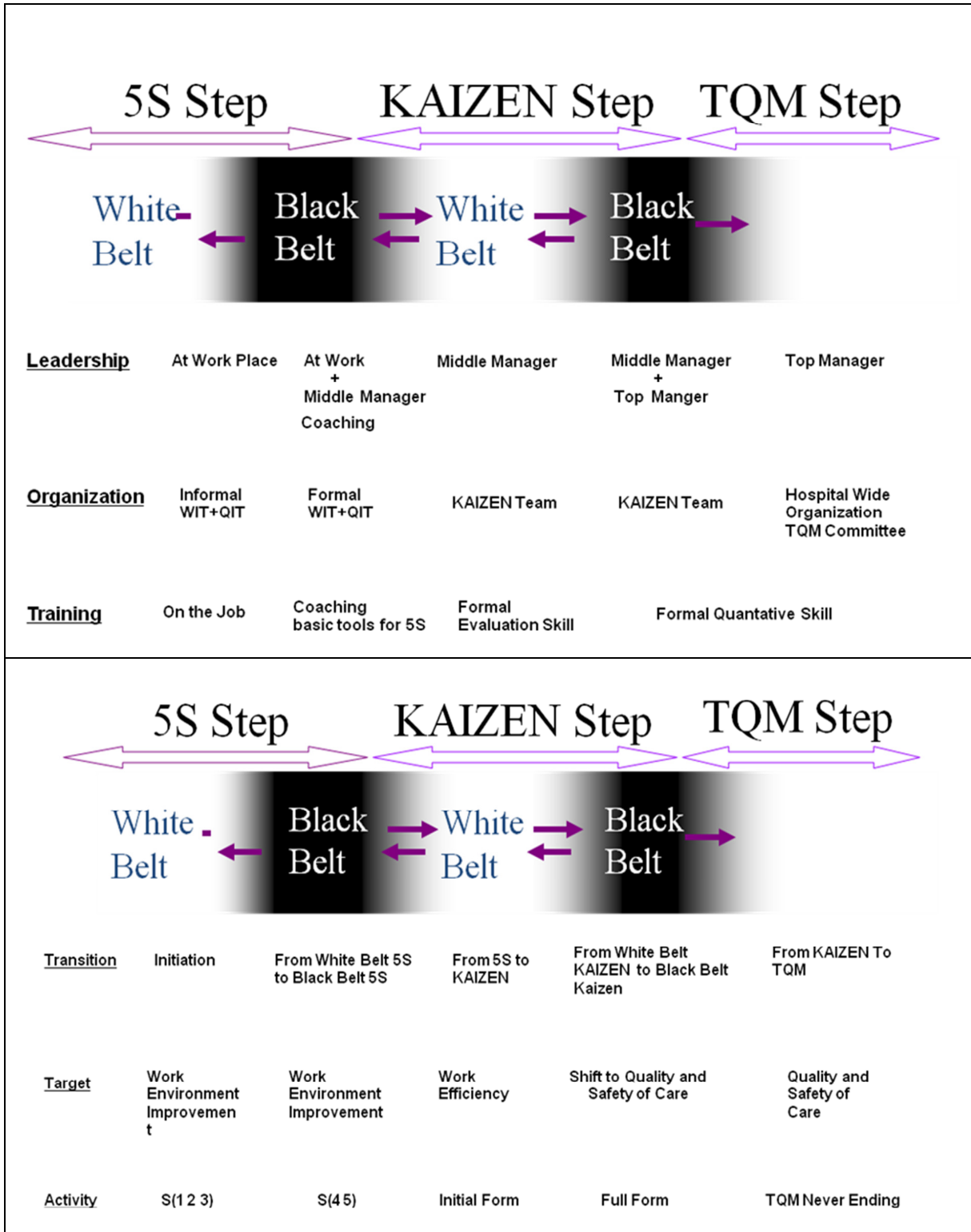


Figure 2-26: Each step of 5S, KAIZEN, TQM

## II-4...WHO concept of Health System

“Health system” is a conceptual framework showing essential functional components, by which the government aim to deliver promotional, preventive, curative and rehabilitative health services to general public.

In 2007, World Health Organization released a book named “Everybody’s Business” and described the roles of WHO to clarify and strengthening health systems in a changing world. In the context of the book, the health systems are built in six blocks; service delivery, health workforce, information, medical products, vaccine, technology, financing and leadership / governance. The overall goal of health systems, described as followings, is achieved through the improvement of access, coverage, quality and safety of the health services.

5S-KAIZEN-TQM approach also contributes to the improvement of the health systems. Indeed, this three step approach, as mentioned, means managerial improvement in health sector as same as the improvement of the health systems.

The following Figure 2-27 illustrates at a glance feature of the health systems which were modified health system six blocks of WHO. Quality of health services are directly related to the effectiveness of various services and responsiveness. Health facilities, regardless the location, size and function, are the major parts of service creation mechanism. Managerial effectiveness through 5S-KAIZEN-TQM should be policy level issue for the betterment of macro-level system management as well as the micro-level hospital management.

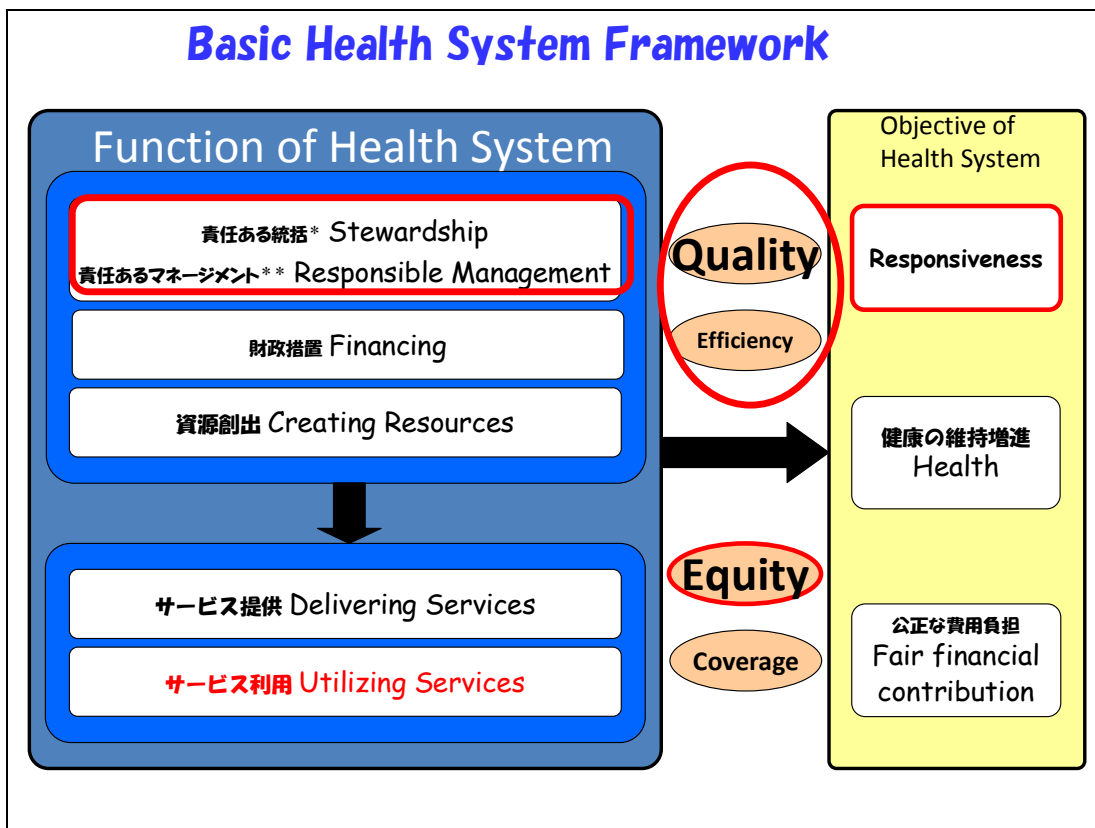


Figure 2-27: Basic Health System Framework

## II-5...Quality

At first, we have to identify what does good quality means. Is it high accuracy or advanced technology? Neither of them means good quality. The quality of outcomes for customer is evaluated only by matching of need of customers. It means that the quality is measured based on the required level of components such as accuracy, cost, timing, quantity and so on.

Quality of health services should not be discussed without clear definition. Here in this textbook of TQM, the "quality" can be explained with several dimensions, which constitute the concept of this important target of health services. In this context, "quality" is a standard, maybe an international standard, of health services, when it is compared to the conditions of existing services.

Safety, effectiveness, patient-centeredness, efficiency, timeliness, and equity are the essential components of the "quality of health services".

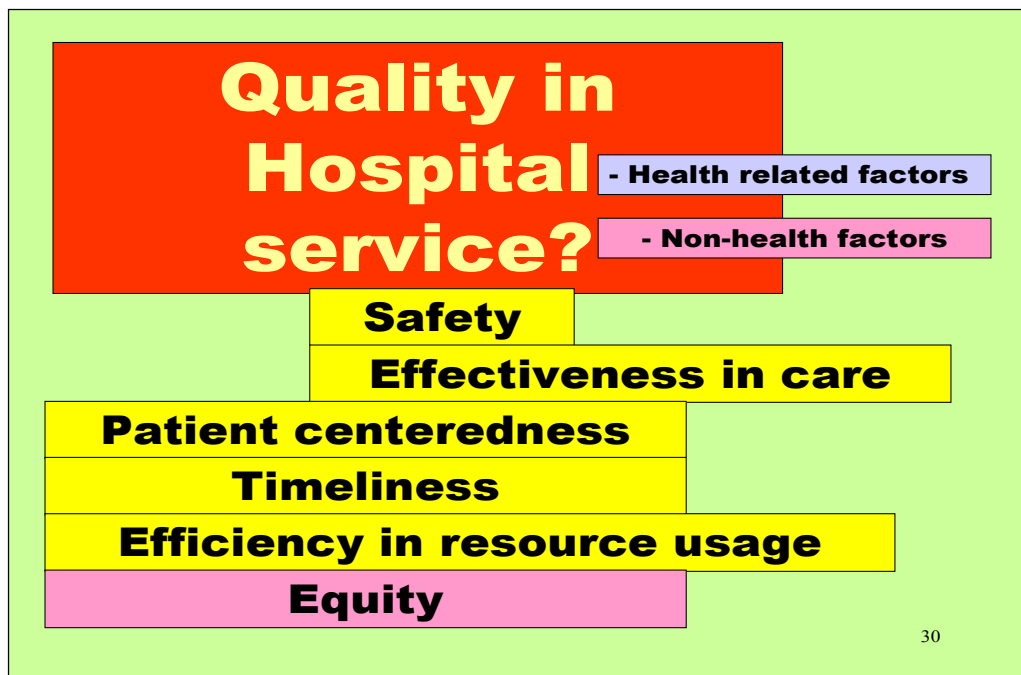


Figure 2-28: Quality in Hospital Service

## II-6...Productivity

There are many different ways of measuring productivity. For example, in a factory productivity might be measured based on the number of hours for producing a good, while in the service sector productivity might be measured based on the revenue generated by an employee divided by his/her salary.

In the public sector, measuring productivity by monetary value is not familiar, because public service is not transacted in the market and most of the hospital fee is not decided based on market prices. Therefore, productivity in the hospital should be considered that "output (No. of care, treatment, diagnosis or cure) per unit of input (labor, equipment, and capital).

In health sector, it has been said that there is trade-off relationship between efficiency and quality of medical service. This is, however, not true. Efficient medical service, same as high productivity, should not be built on the sacrifice of the quality of medical services. The improvement of

productivity, in health sector, means reduction of unnecessary inputs keeping same quality of medical services and / or to increase service delivery without additional inputs. It is the true goal of 5S-KAIZEN-TQM approach in health sector.

## II-7...Safety management in 5S-KAIZEN-TQM approach

Patient safety is the wish of health care workers as well as of patients. Patients do feel betrayed when they find to be injured by health care. Since they seek healthcare for help and cure of diseases by healthcare not for the damage caused by healthcare. No health care workers want to injure patients. But unfortunately, it does happen, “To err is Human”. The most popular current topic in healthcare is “Patient Safety”.

Besides the underlining continuous wish of both providers and the patients, there are several new emergent reasons for this trend. The healthcare technology has been developed and being matured in the last twenty years. After the explosion of new diagnostic and therapeutic innovation in 70’s and 80’s, they became standardized. Most of their outcome can be predicted and measured. Therefore medical accident can be differentiated from result of natural history of diseases. People in general are more aware of the human lights and insist on receiving appropriate care under the influence of the consumer movement and the spread of health knowledge.

Final and the most important reason is the new concept and knowledge of “Patient Safety”. Traditionally it has been thought that each individual is to be blamed when they commit mistake. But healthcare has been delivered by system. Certainly each individual worker has to make their best effort to prevent mistake. But workers can make mistakes and if patient safety system for prevention is in failure, it will result in damage. Therefore instead of blaming individual who made mistake, system should be evaluated and be developed to prevent further damage. By analyzing the root cause of each accident, weakness of the system can be identified. Fail safe system can be introduced.

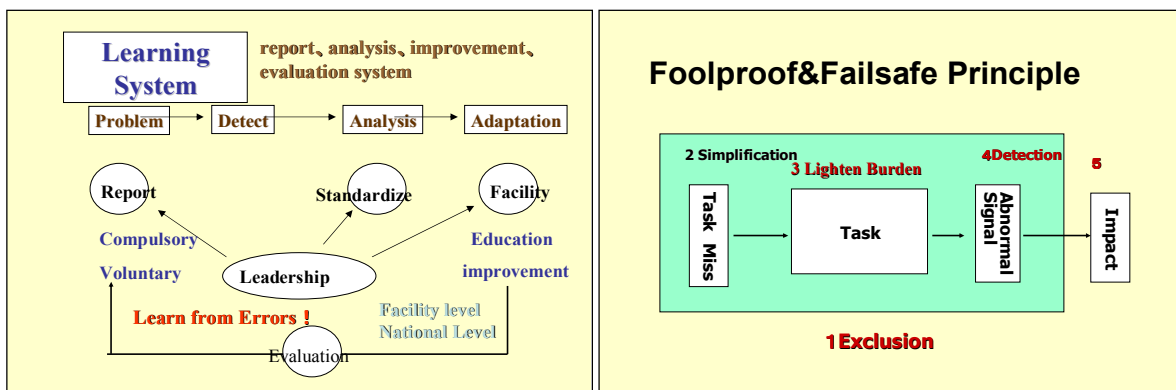


Figure 2-29: “Learning System” and “Foolproof and failsafe Principle”

In the past management of a medical accident has been a part of risk managements after the accident occurred. Now emphasis has been shifted to prevention by harnessing safety culture in the organization. Health industry can learn a lot from other industries such as airplane, nuclear power plant and chemical industry.

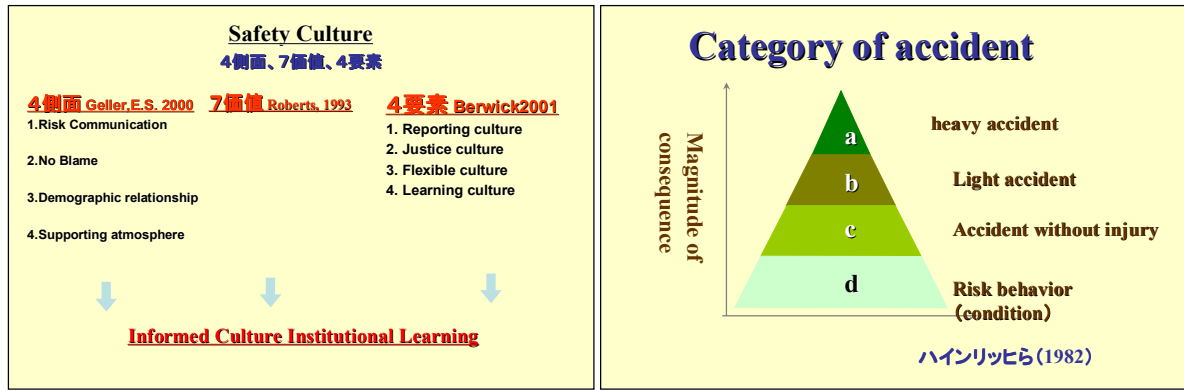


Figure 2-30: “Safe Culture” and “Category of accident”

Based upon this new concept, international movement for patient safety has been launched in 2004 as an International Alliance of Patient Safety organized by WHO. With those new movements, many new knowledge and technology of patient safety has been created and accumulated. Proposed focus on patient safety movement has been “nosocomial infection”, “surgical accident” etc. This patient safety can be a good linked to quality improvement.

**WHO World Health Organization**

**Progress**  
2002.1 Patient Safety Discussion at Executive Board  
2004.10 Organize World Alliance for Patient Safety at Washington D.C.

**Agenda 6 key Sector**  
1. International Cooperation  
2. Patients / Customers Involvement  
3. Definitions of Patient safety terms  
4. Research & Development of Patient Safety  
5. Measures to reduce errors  
6. Reporting system of errors

**2005-6 Forward Program**  
**Nosocomial Infection Control**

**2006-7 Forward Program**  
**Safe Surgery**

WORLD ALLIANCE for PATIENT SAFETY  
Clean Care is Safer Care

WORLD ALLIANCE FOR PATIENT SAFETY  
FORWARD PROGRAMME  
2006-2007

Figure 2-31: World Health Organization (WHO)

Theoretically, the outlier of bad quality outcome is regarded to as an accident. So preventing accident can increase quality in average and narrowing the distribution. Then outlier can be prevented as well. After all patient safety can be very important target for this 5S-KAIZEN-TQM. All 5S-KAIZEN-TQM activities can be linked to patient safety someway. It has been observed that medical doctor is the most reluctant to join these 5S-KAIZEN-TQM activities. But patient safety can be a very good door gate for them to participate to 5S-KAIZEN-TQM.

# Quality and Safety of Healthcare

## ~ Level & Distribution ~

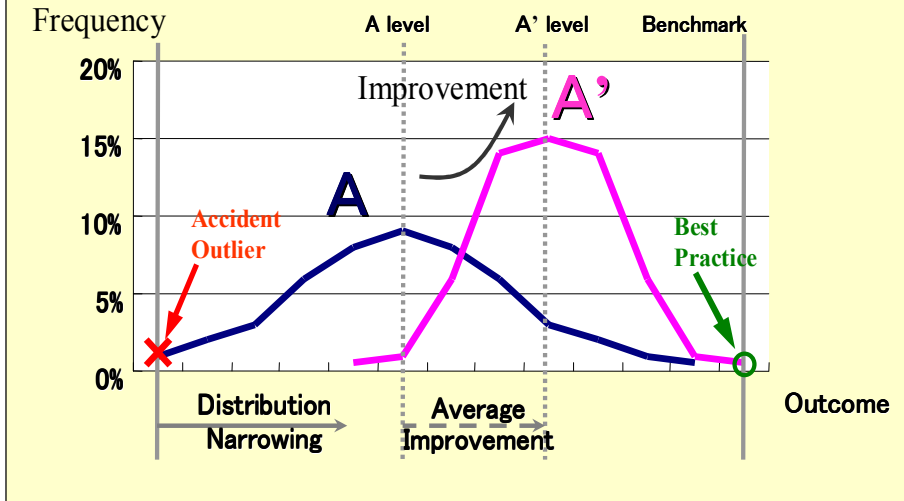


Figure 2-32: Quality and Safety of Healthcare