Challenges in delivering Chinese Standardized Resident Doctor Training – Experience and Innovation of a young Chinese hospital

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Abstract

Background

It has been almost a decade since the introduction and implementation of the Chinese National Standardized Resident Training Program nationwide but variations of training quality and the result of the training remain wide among different training bases and regions. Many of the younger training institutions are facing serious challenge in recruiting, keeping and inspiring trainers and trainees, thereby achieving a viable and competent training program.

Methods

We describe below how we as a young Chinese 3A hospital and training base recruit and inspire our trainees to develop themselves into highly professional and competent doctors. We shall also describe some of the training supervisions and methods we have used in our program, to enable our trainees and young training doctors to achieve these aspirations.

Results

By striking a balance of conventional teaching methods and innovative methods, we are able to inspire trainees to develop a greater understanding of ethics, humanity, dialogue, and team work as well as knowledge and skill. The teaching standard of our young training doctors also improved along the way.

Conclusions

In our limited experience, it would appear that trainees showed more interest and willingness to participate actively in workshop, role play and team work than conventional passive didactic lectures, given the training opportunity. Good supervised training and constructive feedback are indispensable elements for the development of both trainees and young training teachers in a successful training program.

Trial registration: not applicable

Background

In China, before the introduction of the National Standardized Resident Training (SRT), graduate medical training was scattered, unstructured, and unregulated; and unequal in their demand for training organization and staff, teaching contents, ways of teaching and training, appraisal and assessment of the trainees, and eventual certification. These practices unavoidably had produced unequal products, i.e. doctors, with widely varying quality. They had given rise to dissatisfaction, concern and criticism from the public and strong call for reform.[1,2] To meet these calls, seven related ministries led by the Ministry of Health in 2013 published a circular on the establishment of SRT.[3] Its aims are to design, formulate and implement a much more strengthened, structured and standardized graduate medical training program,

and thereby eliminating the unqualified medical practicing doctors and their poor medical service.[4] The national SRT is now made mandatory for any medical graduate who wishes to practice as a medical doctor in China.

Further documents from the relating ministries in the ensuing years had been issued on the construction and work of hospital training bases and professional bases. The bases are asked to learn and follow the relevant national policies as well as the training documents and regulations; and to carry out these guides and rules strictly, with penalty if failing.

Some of the criticism of the training content so far include too much theory, too feeble on humanities and ethics; missing the balance among knowledge, skill and good conduct. There are complaints that many of the teaching staff are ill prepared and unqualified. The trainees have been granted only inadequate decision making and allowed little independent thinking.[5] Above all, the standard and implementation of SRT remain varying and unequal, though to lesser degree nowadays. This is because China has a massive population, expansive land, and numerous regions, some poor and some rich. It is proven a challenge to standardize the training, accreditation and certification.[4]

Shenzhen (SZ) is a fast growing metropolis. Due to the Chinese special and preferential policy granted to it, it has developed into a major Chinese metropolis of some 20 million inhabitants from a fishing village only 40 years ago. For the SZ City Government and its Health and Family Planning Commission, to establish and run an international standard hospital with Chinese socialistic characteristics and to raise the City into a leading world metropolis were high on its agenda for some time. To realize these ambitions, the University of Hong Kong – Shenzhen Hospital (HKU-SZH) was designed and opened in 2012 as a joint venture between the University of Hong Kong (HKU) and the SZ City, hopefully “to be first class nationally and world renown” one of these days. In 2014, it was awarded Australian Council on Healthcare Standards (ACHS) accreditation; and in 2017, the status of 3A Hospital and the National Standardized Resident Training Base. The Department of Medicine of HKU-SZH also became one of the professional training bases in 2017. Our first batch of trainee resident doctors arrived at the Hospital in Sep. 2018.

The Department of Medicine with its seven specialty divisions has formed its own education committee and also a supervisory group comprising the training director of the professional base as well as the medicine training program director, two training secretaries and a teaching assistant (administrative). The education committee meets every two months to discuss teaching plan and methods and so on. The supervisory group participates in inspection of various divisional training bases about their teaching plan and contents, and their implementation and quality, and provides constructive feedback.

Our hospital has been in operation for barely 10 years. The trainers drawn from its medical personnel pool are bound to be relatively young with limited teaching experience. It is a steep learning curve for the young teaching hospital and staff to rise to the challenge. We learn that it is vital to inspire both trainers and trainees to make teaching and learning interesting, inspiring and rewarding. Other than following the national guides and rules, we are trying to introduce some innovative measures of our own to produce

competent medical doctors with knowledge, skills, humanity and ethics. Here we describe what we have done so far in these connections and the results achieved. The local ethics committee at the HKU-SZH has granted this study an exemption from requiring ethics approval.

Methods

1) Conventional Chinese training methods for trainee resident doctors:

Trainees learn on the job by attending in-patients and out-patients and taking up overnight on-call duties, but bedside teaching is limited due to time restraint. There are also a list of mandatory classes as stipulated by the national guides and policy. A number of mandatory teachings lays great emphasis on didactic approach.

2) Innovative training methods for trainees:

To improve the core training of our new resident trainees, humanities and dialogue, knowledge and ethics, and health policies have been taught together. In line with the new training emphasis, we have introduced these elements for the new resident trainees on their orientation week and subsequent on-the-job training. Our hospital's unique "Patient Relation Office" handles an average of over 150 patients' enquires each week including complaints. A special "Patient Relation Office" workshop is designed for the trainees for their orientation week with role play. They are also asked to spend half a day in our hospital's Patient Relation Office for real life experience. Our hospital has a well-established Family Medicine (FM) Department. Trainees have option to attach to the FM clinic for experiences. Regular Clinicopathological Conference (CPC) and specialty meetings, either face-to-face or virtually, given by the HKU Professorial staff in English, serve to encourage their active participation and expand their horizon.

One of our major teaching challenges is to structure our teaching to meet the trainees' varying academic level and career (specialty) orientation when there may be more than 10 trainees in many medical specialties at any one time. As we proceed to the third year of our SRT, we have decided to group the resident (R) trainees into R1, R2 and R3, based on their seniority. The more senior trainee R3 would be tasked to watch over the R2, and R2 over R1, thus developing their role of responsibilities and team spirit and work. We have also developed a new multi-disciplinary team (MDT) workshop to inspire trainees of different years' experience to work together as a team in solving challenging cases. For this, a real life example will be selected and at least 3-5 specialty teams formed to carry on the discussion with a coordinator in each team. The case has been made known to the teams in advance and every team member has been assigned a role to play.

3) Train the young training teachers:

We attempt to make training more interesting, appealing, challenging and rewarding by allowing our young training teachers and assistant training teachers to be observed under supervision of senior trainers, when they teach and by receiving constructive feedback. We have also arranged annual resident

trainee speech contest where young training teachers will make short teaching presentations. Their performance will be judged by external trainers and their experience shared.

4) Supervision and Feedback:

Constructive feedback and auditing are useful tools to assess our teaching and training methods, their failure and success; and to make improvement. They have been built into most of our classes. The format of our feedback has been evolving continuously and becoming now more solid and easier to operate. Each one of our trainees is matched with a 3-year long educational supervisor or ES (associate chief title or above) by mutual selection. The role of the ES is to provide trainees with support and advice for their work and any other difficulties. Recently, the role of ES has been further redefined so that the ES can provide more support and guidance to the trainees assigned to their care.

Results

In 2018-2020, a total of 49 resident trainees have been enrolled in the Department of Medicine. Another 54 Family Medicine trainees also rotated to its different specialty divisions, totaling 13 months for each of them. At the same time, the number of our qualified young training teachers have also grown from strength to strength since we launched our strenuous and successful campaign for “train the trainers”.

The “Patient Relation Office” workshop in the trainees’ orientation week emphasizing on humanity, dialogue, ethics, knowledge and skill, and our subsequent stress on the same have made a major impact on our resident trainees. In addition to meet the rigid teaching targets laid down by SRT and other governmental rules and regulations, we have established English teaching, CPC, specialty meetings led by the professorial staff from HKU either on-site or virtually. Our resident trainees enjoy hearing the latest international medical advances and learning to converse in English. The MDT case discussion stimulates proactive thinking and promotes the development of an investigative mind, analytical skill and team work.

Regarding “train the trainers”, since we have taken measures listed under 3) to make our young teachers’ teaching more interesting, demanding and fun, the overall teaching qualities have been improving. The role of the ES has been redefined and strengthened along the way, providing more active support to the trainees assigned to their care.

9 of our 2018 resident trainees from our Department of Medicine took part in the Annual National Professional Proficiency Examination for Standardized Resident Trainees in Nov. 2019 and won the second place, only next to Peking Union Medical College. The next year, 5 resident trainees took part in the same examination and came 5th. In Aug. 2019, we had the honor to run a workshop about HKU-SZH training experience in the 2-day Annual SRT High Level Conference (Beijing). Our Medicine professional base director cum Chief of Service of Medicine had been named one of the 30 best national professional base directors (2020), thanks to the efforts of all. All these achievements tend to show the moderate success in our SRT.

Discussion

The elements of a good graduate medical education consist of committed and qualified trainers, solid and dedicated resident trainees, balanced teaching contents, honest implementation, and strong institutional supports and government guides amongst others. As the Chinese population is ageing and the demand for better and more medical doctors and services intensifies, there are bound to be enormous pressure to strengthen the SRT to produce more well-qualified medical doctors.[6] To meet the national goal of “Health China 2030”, the relevant Chinese ministries have urgently called for more and better reform for the medical education system. The national policy provides strict rules, regulations and supervision. There are numerous and meticulous information and treatises on “train the trainers” and SRT in printing or online. Only a small number of top medical establishments in big cities such as Peking, Shanghai[6] and Chongqing[7] manage to secure the best trainers, trainees, infrastructure and software, thereby maintaining their continual superiority and success. For many young hospitals in new cities like ours, it is a serious challenge and uphill journey to recruit, train, inspire and keep good and dedicated resident trainees and training teachers and thereby building up a viable SRT.[5, 8]

The UK Royal (Medical) Colleges have for many years emphasized the need to allocate time in Consultant job plan for teaching. In China, national policy offers trainers a fee for carrying out teaching and training duty in their own private time. But even then, some trainers would much prefer to pursue clinical work and scientific research to teaching and training because the former two lead to a better career and richer reward. Good trainers need to be trained and nurtured. Making teaching interesting through observation and under supervision by senior trainers; we provide our young training teachers with constructive feedback. We hold young teachers’ speech contest and other activities too for them. As a result, we have led many of our young teachers to the path of teaching and training. Our Department of Medicine would also consider teaching and training important factors in the promotion of its junior resident to senior resident position.

As we noted earlier, our initial feedback indicated that the preparation of some of our young training doctors for their teaching was not adequate. Since we introduced our “train the trainers” as above, their training quality has improved. We have continued to emphasize on humanities, ethics, dialogue, knowledge and skill in our SRT. In this regard, we might mention that as a very young hospital, HKU-SZH has maintained a very close relation with HKU, its Faculty of Medicine and Queen Mary Hospital and drawn inspiration, aspiration and encouragement from their century old spirit, tradition, legacy and excellence. They have been illuminated and embodied in the Chinese motto of HKU: to manifest virtue and to investigate matter (mingde gewu: □□□□). They are from the teaching of Confucius.

We are trying to be motivated and guided by the motto. The provision of our core training has comprised of humanities and scientific pursuit. They have been built into our regular on-the-job training. In order to urge our trainees to develop their literature search skill, analytic ability, team work, dialogue, humanity and ethics, we have borrowed the broad concept of MDT discussion and designed MDT case discussion sessions for group study every two months. It has turned out a big success.

Finally, resident trainees need to be inspired and supported. We use a mini multisource feedback (MSF) every 6 months to reveal any inherent problems of the trainees. We have provided each resident trainee a named 3-year ES to offer assistance. Since it is an earmarked one to one arrangement and therefore there will be no ambiguity and shifting of responsibility. This is especially needed when the trainee first leave their own towns and cities for a new and unfamiliar metropolis.

In the end, much of our work have been an amalgam of the traditional and modern. Our work and experience so far must remain limited and partial because it is not easy to measure the usefulness and the effectiveness of our new teaching methods against those of the conventional ones when the feedbacks have been collected through our trainees and their teachers only.

Conclusions

While the national SRT is taking its shape, and maturing, general consensus has been that much more improvement is needed.[9] It remains a challenge to standardize the teaching and training quality among the numerous and diverse medical training institutions and bases. It is especially a steep learning curve for a young hospital and its team to reach for and meet the standard. As a young hospital, we have studied, learned and formulate our own teaching methods along with conventional teaching and now present our experience for our readers. We have learned that we have to “walk on two legs”: good legislation and strict implementation. The latter must be realized through concrete, ingenious, adaptive, innovative and accumulative, even insignificant and minor.

Yet they will work and make the difference when put together as shown by our experience and learning.

It is only natural, inevitable and imperative that China is moving forward and into the specialist training. This poses another gigantic challenge and opportunity for the Chinese graduate medical education and training. We are looking forward to it with excitement and anticipation to contribute our efforts.

Abbreviations

ACHS Australian Council on Healthcare Standards

CPC Clinicopathological Conference

ES Educational supervisor

FM Family Medicine

HKU-SZH University of Hong Kong-Shenzhen Hospital

HKU University of Hong Kong

MDT multidisciplinary team

R Resident

SRT Standardized resident training

SZ Shenzhen

Declarations

Authors' contributions:

LMY and LMJ contributed to the study methods and analysis

PP contributed to the original draft, review and editing of the manuscript

All authors read and approved the final manuscript

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Availability of data and materials: The dataset that support the findings of this study are available from the corresponding author upon reasonable request.

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