Full Length Research Paper

An evaluation of pre-service training for the Integrated Management of Childhood Illness (IMCI) in medical schools in Indonesia

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ABSTRACT

The study evaluated ten-years implementation of pre-service training of Integrated Management of Childhood Illness (IMCI) in the curricula of 15 state medical schools in Indonesia. Data were collected using questionnaires and interviews, as well as focus group discussions with deans, heads of the child health departments, IMCI teachers and students. Our study observed that IMCI was still part of the curriculum in 11 of 15 medical schools surveyed. The implementation varied widely in the 11 medical schools still implementing IMCI. The variations were mainly due to the availability of time and number of IMCI trained staff, which were decreasing. Some medical schools faced shortage of staff and time to teach IMCI, which was partly associated with non-universal acceptance of IMCI among paediatric teachers. Some regarded IMCI as not suitable for medical students because of its simplification of medical diagnosis into classification and lack of explanation on reason or medical evidence behind every classification and treatment.In conclusion, this study suggested that the teaching of IMCI in medical schools in Indonesia was endangered unless measures were taken to ensure its sustainability, i.e. supports from the Indonesian Paediatric Society (IPS) and all paediatric teachers.

Key words: Integrated Management of Childhood Illness, pre-service training, medical schools, Indonesia

INTRODUCTION

Every year, around 8 million children in the developing countries die before reaching the age of five years(Liu et al., 2012). Most of these deaths are preventable because they are caused by one or a combination of pneumonia, diarrhoea, measles, malaria, or malnutrition. Projections through the year 2020 indicate that these conditions will continue to be major contributors to child deaths unless greater efforts are made(Liu et al., 2012).

In response to this situation, the World Health Organization (WHO) and the United Nation Children's Funds (UNICEF) developed and introduced globally a comprehensive strategy to manage sick children aged from one week to 5 years called the Integrated Management of Childhood Illness (IMCI)(WHO-UNICEF, 1999). Since then, more than 100 countries, mostly of the developing world, have used IMCI(WHO, 2012).Facing health problems similar to those faced by most of the developing countries in the world, in 1996, the Indonesian government adopted IMCI to be used as an approach in the management of childhood illnesses.

The concept of IMCI is to integrate the management of several diseases contributing most to the burden of ill-
health in children in the developing countries. Apart from focusing on treating diseases, IMCI also emphasizes a more preventive and promotional approach, i.e. immunization and mother/parent counselling (WHO, 2012). IMCI has been reported to improve quality of care in many countries adapting IMCI (El Arifeen et al., 2004; Amaral et al., 2005; Ahmed et al., 2010).

To have significant impact on child health, a minimum 60% of health workers in primary care settings should be trained for IMCI (Ahmed et al., 2010; WHO-Western Pacific Region, 2010). In Indonesia, as well as in many parts of the world, this is not easy to achieve (Ahmed et al., 2010; Huicho et al., 2005). One of the strategies to increase training coverage and to enhance sustainability is to introduce IMCI in medical and nursing schools, i.e. pre-service training (WHO-SEARO, 2005). That was why the Indonesian Paediatric Society (IPS), as the organization for paediatricians in Indonesia, adapted the generic IMCI algorithms into materials suitable for medical students. In collaboration with the most influential state medical schools in Indonesia, they also worked to put IMCI in the medical school curricula. IMCI began to be taught in most medical schools in Indonesia in 1998 (Tim PMPT-IDAI, 1998).

After its introduction, the implementation of IMCI teaching was constantly shaped and reshaped by changes in the medical schools' curricula. However, evaluations in the years 2000 and 2005 showed that IMCI was still part of the curriculum in most of the state medical schools in Indonesia (WHO-SEARO, 2005). In 2006, the release of the latest standard of competencies for medical doctors in Indonesia by the Indonesian Medical Council meant every medical school had to review, again, their curricula (Indonesian Medical Council, 2006). It was our concern that this constant challenge of repeated and, sometimes, revolutionary changes in the medical schools' curricula might impact on the teaching of IMCI. Therefore, the aim of this study was to draw lessons from the implementation of IMCI in the curricula of state medical schools in Indonesia, after 10 years of implementation and after several changes in the medical school curricula. As this is one of the few countries having done so, and with this long experience, these findings are of interest globally.

METHODS

The evaluation was carried out in fifteen Indonesian state medical schools: from June to November 2007 for seven state medical schools and from November to December 2007 for the remaining eight state medical schools. The first seven state medical schools were Sriwijaya University (Palembang), University of Indonesia (Jakarta), Padjadajaran University (Bandung), GadjahMada University (Yogyakarta), Diponegoro University (Semarang), Airlangga University (Surabaya), and Hasanuddin University (Makassar). These seven universities were chosen first because they were the oldest and the most influential medical schools in Indonesia. They were also the first medical schools to implement IMCI. The results of this evaluation were used to refine the evaluation of the next eight medical schools, namely: Syiah Kuala University (Nanggro Aceh Darussalam), Sumatera Utara University (Medan), Andalas University (Padang), Sebelas Maret University (Surakarta), Brawijaya University (Malang), Lambung Mangkurat University (Banjarmasin), Udayana University (Bali), and Sam Ratulangi University (Manado).

The evaluation used an integrated approach of combining quantitative (surveys) and qualitative methods (interviews and focus groups discussions). At the end of the study, two workshops, one after the evaluation in seven medical schools and the other after the evaluation in the next eight medical schools, were conducted.

The surveys

The quantitative data was obtained through structured questionnaires adapted from the WHO's Pre-service Training Questionnaire forms. A team consisted of IMCI experts from WHO-Indonesia, the IMCI team of the Indonesian Paediatric Society (IPS), experts in medical education and in social research evaluated the content validity of the questionnaires.

There were specific questionnaires for each category of respondent, i.e. policy makers, teachers and students. Every medical school was given two sets of questionnaires for policy makers, one for the dean/ members of the board of dean and one for the head of the child health department. We invited all IMCI teachers and a random sample of 10 students in each medical school to fill in the questionnaires for IMCI teachers and for students, respectively. Questionnaire packages were sent to the medical schools prior to the evaluation.

The questionnaires for policy makers were mostly on how they perceived IMCI, its place in the medical school curricula and the availability of funds to run the teaching process. The questionnaires for teachers and students were focused on what was happening in the process of IMCI teaching. All respondents were also encouraged to inform every other possible supporting and constraining factor for IMCI teaching and learning process.

The evaluation teams consisted of members of the IMCI team of the Indonesian Paediatric Society (IPS). In order to minimize different interpretation of the questionnaires between evaluators, all evaluators gathered to learn and discuss the content of the questionnaires. Every evaluation team consisted of at least three paediatricians from medical schools outside the medical school visited. All questionnaires were sent
back to the coordinating centre and compiled to be analyzed. The quantitative data were presented as proportions or means, as appropriate.

**Interviews and focus group discussions**

Qualitative data were collected through in-depth interviews and focus group discussions. Every evaluation team was given sets of open-ended questions to guide the interviews and the focus group discussions. The respondents for quantitative questionnaires were also the respondents for qualitative interviews/ focus group discussion. The questions asked were mostly clarification for qualitative interviews/ focus group discussions. Every evaluation team was given sets of open-ended questions to guide the interviews and the focus group discussions. The questions asked were mostly clarification and in-depth exploration of the information given in the questionnaires, so they varied between types of respondents.

When the respondent to that particular inquiry was only one person, e.g. coordinator for undergraduate study or outpatient clinic supervisor, an in-depth interview was performed. When the question could be better answered in groups, e.g. the dean and his board, IMCI tutors or medical students, a focus group discussion was conducted. To ensure independence, the interviews and the focus group discussions were conducted separately for every type of respondents.

The interviews and the focus group discussions were recorded on tapes and transcribed by the evaluators. Before the evaluation, a social research expert gave a short course on how to conduct an in-depth interview and focus group discussion to the evaluators.

A descriptive content analysis was used to analyze the data obtained from in-depth interviews and focus group discussions. Meaning units or codes were identified from the verbatim transcripts. The codes were then condensed into sub-themes and themes. The process was performed with the help of OpenCode (version 3.4, Umea, Sweden).

Three investigators (MJ, DA, AM) independently developed codes, sub-themes and themes from the transcripts. The results were then discussed with each other and the other investigators.

In order to increase trustworthiness of the study, triangulation of analyses using insider and outsider perspectives were used. The qualitative data were analyzed by three paediatricians who were also members of IMCI team of the Indonesian Paediatric Societies (MJ, SW, YS), one general practitioner who was once a medical student learning IMCI (DA), one IMCI expert from WHO (MW), and one social scientist (AM). MJ, SW and YS gave the internal perspectives of IMCI teachings in the Indonesian medical schools, while the latter employed outsiders’ perspectives.

**The workshops**

The first workshop, after the evaluation of the first seven medical schools, was attended by the head of the Child Health Departments from these schools, representatives from the Indonesian Paediatric Society (IPS), Ministry of Health and WHO-Indonesia, as well as all members of the evaluation teams. In this workshop the evaluators reported the results of the evaluation. The workshop's participants discussed achievements, drawbacks, obstacles and plan for the future.

The second workshop, after the evaluation of the second eight medical schools, was attended by heads of the Child Health Departments from all 15 medical schools, i.e. both the eight evaluated later and the seven evaluated before, representatives from the Indonesian Paediatric Society (IPS), Ministry of Health and WHO-Indonesia, as well as all members of the evaluation team. This workshop was also attended by coordinators of medical education from all state medical schools as this workshop was also intended to find a better way to integrate IMCI into the medical school curricula.

**RESULTS**

All deans and/or members of board of dean of the fifteen medical schools evaluated were interviewed. At the level of the Child Health Departments, 14 heads of the departments were interviewed. One was unavailable, he sent his deputy to represent him. Questionnaires were filled by 82% (132 of 161) of the IMCI teachers, ranged between 75 to 90% in each medical school, and, on average, we met 7.4 students (range: 5 to 10) per medical school.

**Implementation of IMCI Teachings**

IMCI was still part of the curriculum in 11 out of the 15 medical schools surveyed, i.e. in 5 out of the 7 first users of IMCI and in 6 out of the next 8 medical schools. In 4 medical schools, IMCI teachings were stopped in 2000, 2001, 2004, and 2005 respectively. The reasons for discontinuing IMCI varied from lack of resources to changes in the curriculum. One medical school that stopped very early in the process (in year 2000), stated that they were ignored by the IMCI team of the Indonesian Paediatrics Society (IPS). Overall, those four medical schools stated that lack of coordination, support or, at least, communication from the IMCI team of the Indonesian Paediatrics Society (IPS), had contributed to the ending of IMCI teaching. Without support and reinforcement, as time went by, IMCI gradually disappeared from the curriculum (Box 1).

In the 11 medical schools still implementing IMCI as part of their curriculum, the implementation practices varied widely. Seven of them taught IMCI at all levels of medical education, i.e. from undergraduate study to
residency. The remaining universities taught IMCI only to either undergraduate and clerkship students or just to clerkship students.

The time allocated to IMCI teachings, both theory and practice, varied throughout the medical schools. Most of the medical schools gave IMCI teaching on the first days of clerkship in the Child Health Department. The teachings were basically an introduction to IMCI, a video session of IMCI, and presentation and discussion of IMCI cases. Two medical schools practiced IMCI in the outpatient clinic. One medical school mentioned that the only IMCI teaching done in their school was integrating the teaching in lectures of each sub department, e.g. the sub department of nutrition was responsible for the teaching of the classification of malnutrition and feeding counselling, the sub department of gastroenterology was responsible for teaching the classification diarrhoea, dehydration and its treatment, and so on. There was no specific IMCI topic in one lecture, thus endangering the essential core message of IMCI as an integrated approach.

One medical school taught IMCI in two phases. In the first phase, IMCI was given through lectures and video sessions and served as a part of the introduction program of the clinical rotation. In the second phase, students were given a chance to implement IMCI in a real setting, i.e. in public health centres, for three weeks. All doctors in those public health centres had been trained in IMCI so they could supervise the students.

Some medical schools stated that because of the changes in the medical curriculum that occurred over the years, IMCI teachings were gradually diminishing. In one medical school, before the change in the curriculum, IMCI had been taught both in the undergraduate and clerkship level. Students had a specific schedule to learn IMCI. IMCI had been given explicitly as one topic in the undergraduate level. In the clerkship level, students had been obliged to present cases from the outpatient clinic that they had managed using the IMCI approach. After the changes in the curriculum, IMCI was erased from the undergraduate lectures. In the clerkship level, practices in the outpatient clinic had also gradually disappeared because less and less teaching staffs were involved in the teaching processes.

One medical school stated that because of lack of trained staff, senior residents taught IMCI to medical students although they, themselves, were not properly trained in IMCI. They were only given the IMCI handbooks and were compelled to teach IMCI to students in the clerkship level. Residents in this medical school complained that sometimes they were not familiar with IMCI teachings but had to teach it anyway.

The average time spent for IMCI teachings varied widely, from 1 to 36 hours in the undergraduate level and from 2 to 12 hours in the clerkship level. However, data for undergraduate level seemed to be not quite reliable because lots of the IMCI teachings in the undergraduate level were given as parts of teachings of other subjects.

The ratio between instructor and student also varied greatly, i.e. from the largest ratio of 1:127 and the smallest ratio of 1:9. In the school where instructor student ratio was 1:127, IMCI teachings were mostly given in the undergraduate level through classroom lectures.

The average minimal number of patients every student should manage using the IMCI approach varied from 3 to 13 cases per student. Students’ competencies on IMCI were evaluated through written examination in 4 out of 11 medical schools (4/11), oral examination (6/11), filling of a log book (4/11), practical examination (4/11), and observation (8/11).

Supporting and constraining factors

Policy makers: The deans and the heads of the child health departments

The questionnaires showed that most of the deans, i.e. 9 in 15, supported IMCI. One dean said no, while 5 deans kept the question blank. The interviews showed that, being not a paediatrician, most of them had never heard of IMCI before the visitation. Those who did not fill the question and the one who opposed, changed their mind after the visitation team explained what IMCI was. Basically, they supported the implementation of IMCI, however, most of them thought it was the paediatric department who should play the main role in this.

When the term of support went specifically to the availability of funds, most of the deans hinted that it was not the main issue. One dean said that funds could be arranged as long as there was a clear proposed activity. Some said that as long as it was in the curriculum it could be funded as any other learning activity. Of course, there would be limitations of budget, but it seemed that the funds needed would not exceed the limit (Box 2).

Heads of the Child Health Departments had slightly different views. Although most of them supported IMCI teachings, they admitted some obstacles that had constrained the implementation of IMCI. From the questionnaire, 10 out of 11 heads of the Child Health Departments still implementing IMCI stated that lack of funding was one of the concerns in IMCI implementation. Other factors included lack of IMCI trained staff members and lack of teaching materials. The percentage of IMCI trained staffs among all educational staffs in each medical school ranged from 6.3%, i.e. 2 out of 32 staffs to 100%, i.e. 8 of 8 staffs. Overall, in the fifteen medical schools, only around 27%, i.e. 116 out of 430, staffs were trained for IMCI.
Teachers

Most of the teachers supported IMCI implementation. They thought IMCI was useful for students because of its integrated concept. It was also good because it taught good feeding and breastfeeding counselling as well as good communication skills. IMCI taught early detection and had an easy referral system (Box 3).

Most of the teachers considered IMCI to be practical and simple. However, the word simple could be both positive and negative. Simple because it was easy for students to learn IMCI, but it was also considered to be too simple for a medical student. Some thought IMCI was only suitable for nurses or midwives, not for medical doctors. IMCI was set like a cook-book while students should be able to understand the pathophysiology of a disease and a reason behind every diagnosis and treatment. Students had to make a diagnosis, not just a classification. Learning IMCI was thought to be a setback in medical education. This was the main reason that in some medical schools, IMCI was not supported by all staffs of the department (Box 3).

The fact that not all staffs supported IMCI led to problems of limited staffs and time to teach IMCI. The staffs who supported IMCI had to do all the tasks that made them exhausted. This fact seemed also to be the reason that, after ten years of implementation, IMCI had not been officially integrated into the curriculum, and worse still, did not survive the change of curriculum in some medical schools. Being not in the curriculum led to no allocated funds for IMCI teaching. As some deans and heads of the departments had also said, money was not the main issue, commitment was (Box 2).

Some teachers thought, the misconception that IMCI was a setback in medical education was caused by the way IMCI was introduced. The IMCI training for lectures in medical schools had used the standard WHO IMCI training. There was no explanation to the reason of why, for example, IMCI used fast breathing to classify pneumonia or why IMCI used certain drugs for certain classification. Lectures in medical schools needed more explanation; they wanted to know the research behind the IMCI algorithm. They needed to decide whether the evidence behind the algorithm was scientifically justifiable (Box 3).

Limited facilities were also an issue for IMCI teaching. The IMCI team of the Indonesian Paediatric Society (IPS) had given some teaching materials at the beginning of the program, ten years ago, and that was all. Most of the teaching materials had been lost or damaged. Teachers also thought that those teaching materials needed to be updated because some of the contents were out of date. These facts gave an impression of lack of coordination and encouragement from IPS.

Setting for practicing IMCI was a problem in many medical schools. Most outpatient clinics of a university hospital, which was a top referral hospital in the region, were not a suitable place to practice IMCI. A heavy patient load was also a problem because filling IMCI forms took time, especially for inexperienced medical students. One medical school made their students to practice IMCI in health centres of a nearby district because all medical doctors in the district had been trained to be a tutor of IMCI.

Students

Most students showed a positive attitude towards IMCI, both in the questionnaires and in the interviews. They considered the IMCI approach very useful because of its simplicity and integrated concept. IMCI had a clear algorithm that helped them manage their patients.

Some students, however, felt that since the time to learn IMCI was so short, they had not had time to really understand its concepts. They had learned how to fill the recording forms but they did not really understand what this was all about. The problem was made worse when, because of limited time of trained staff members, IMCI teaching was delivered by the residents. Students thought that those residents, most of the time, did not really understand IMCI.

Besides limited time and trained staff, students complained of shortage of teaching materials. They did not have the modules, they had to copy the algorithms which made them black and white, and most of the videos were broken. Students, especially those learning in big third-level referral hospitals, also complained that they had difficulty in finding suitable patients since most of the patients coming to the hospital were referred cases.

The workshops

The agenda of both workshops were presentations of results of the evaluations followed by discussions on future agendas for IMCI in medical schools. There were almost no objections on the necessity for revitalization of IMCI teaching, however, there were lots of arguments raised when the discussion got to the point on how it should be implemented. Everybody had agreed that for sustainability of IMCI teaching, integration into the curriculum of the medical school was a necessity. However, variability of methods in delivering medical education plus variability in resources made uniformity in method of IMCI teaching almost impossible.

Other important issues voiced by the participants of the workshop were the standard of competencies for IMCI teaching. Everybody agreed that “the generic IMCI”, which was intended for nurses and midwives, was not suitable for medical students. The IMCI teaching had to
be developed to match the standard for medical students.

**DISCUSSION**

IMCI has an important role in the teaching of paediatrics in medical education in Indonesia. IMCI introduces approaches to prevent and manage major illnesses in children less than five years of age as well as to promote healthy growth and development, a strategy that ensures a holistic approach to a child’s problem (WHO-UNICEF, 1999; WHO, 2012). This concept is appealing and it was based on this concept that Indonesian Paediatric Society (IPS) introduced IMCI into the Indonesian medical school curricula more than ten years ago and decided to revitalize the teaching in the performed workshops (Tim PMPT-IDAI, 1998).

However, after ten years of implementation, IMCI teaching in the 15 medical schools surveyed has not progressed significantly; some have even stopped the teaching or showed symptoms of deteriorating. After ten years, only less than 30% of the paediatric educational staffs are trained for IMCI. IMCI teaching for medical students is even not universally accepted in some of the medical schools.

Things got worse when the Indonesian Medical Council released the latest standard of competencies for medical doctors in Indonesia. Almost all medical schools reviewed their curricula, resulting in addition or deletion of some previous teachings. Without universal acceptance from all staff in the paediatric department, IMCI has difficulty surviving.

The problem might have already begun since the introduction of IMCI. The IMCI team of Indonesian Paediatric Society had recognized some problems that might induce resistance to IMCI, e.g. the simplification of diagnosis into classification, the lack of explanation on the reason behind every decision to choose a classification or a treatment. The IMCI algorithm modules were constructed like a cook-book, which were perhaps suitable for in-service training but certainly not for lectures in universities.

To overcome this possible obstacle, the IMCI team of the Indonesian Paediatric Society had formulated the necessity to include bridging and positioning into the standard IMCI teaching before its introduction into the medical schools. The concept of bridging and positioning were a concept of bridging the IMCI algorithm with the evidence-based medicine taught in medical schools and the positioning of the classification in IMCI algorithm within the context of a medical diagnosis. Unfortunately this concept had never really become concrete, so IMCI was introduced in its “generic” form.

Lectures in pediatrics faced pressures to keep up with advances in medical technology and evidence based medicine. The way some of them regarded IMCI as superficial, narrow-minded pragmatism or a set-back in medical education showed how IMCI was misunderstood. This lack of understanding made some educational staff reluctant in supporting IMCI because they were not sure of its value.

IMCI had to be introduced differently from the “generic” introduction for in-service training. IMCI has to be presented along with the evidences and the studies underlying the algorithm. Furthermore, as medical evidence grew, the content of IMCI needed to be periodically updated.

Without universal acceptance from all paediatric teachers, IMCI teaching has always been regarded as a “side dish.” Side dishes will always be at risk of elimination when resources, such as funds or staff are limited. Funds and staff are always limited, no matter how we put it in the prioritization list.

Experiences from some other countries like Vietnam, China and Sudan also observed similar trend, the main challenges in the teaching of IMCI in medical schools were, among others, shortage of teaching staff and integration of IMCI into the rest of the pediatric teaching (WHO-Western Pacific Region, 2013; WHO-EMRO, 2013).

The report of a technical consultation on IMCI training approaches and pre-service IMCI, held at WHO in 2007 also concluded that the main challenges for pre-service IMCI were: negotiating adequate time and placement of IMCI in the curriculum, ensuring adequate facilities and organization for clinical sessions, sustaining the supply of teaching materials and coordinating between different academic programmes. The decision to face the first three challenges highly relied on the Department of Paediatrics, relied on how the staffs regarded the importance of IMCI in medical education.

This is also the reason IMCI teaching is less than optimal. Only sub-divisions associated with diseases in IMCI, such as the sub-division of gastroenterology for diarrhoea or the sub-division of respirology for cough, are compelled to introduce a little bit of IMCI in their lectures. Many medical schools introduced IMCI in parts, losing its integrated approach.

The workshops decided that it was impossible to unify the methods of implementation in the various medical schools. Moreover, variations in IMCI implementation could be viewed as an advantage in the development of IMCI teaching. However, everybody agreed to the necessity to have standardized competencies for IMCI across all medical schools. Our study is the first to be published which provides a detailed follow up of what happened in a country.

The introduction of the “Pocket book of hospitals care for children” in Indonesia was seen as an opportunity to link traditional paediatric training with IMCI. This book has also been translated, adapted and adopted by the
Indonesian Paediatric Society, to be used by paediatricians and general practitioners in Indonesia (WHO, 2005; Ministry of Health Indonesia-Indonesian Paediatric Society, 2009).

Continuous support and coordination from the Indonesian Paediatric Society (IPS) through its collegium for medical education was also deemed necessary for the sustainability of IMCI teaching. The IPS needs to make a special task force, one of whose duty was to coordinate the implementation of IMCI in all medical schools, i.e. through building of networking. Other duties of this task force were to find solutions for obstacles of IMCI teachings.

CONCLUSION

The teaching of IMCI in medical schools in Indonesia is endangered unless measures are taken to ensure its sustainability. Support from Indonesian Paediatric Society (IPS) is essential because they, in collaboration with the Indonesian Medical Council, had the authority to shape the paediatric curricula. IMCI teaching should also be supported by paediatric teachers, hence the necessity to introduce IMCI together with its bridging and positioning, i.e. the most recent evidence behind every classification and treatment.

Box 1. Some constraining factors that ended IMCI teaching in 4 medical schools

Excerpt from interview with teachers

“We were very eager; all staff supported this IMCI teaching. We spent 2 to 3 million rupiahs to train the staffs. Then, we received a letter from the Indonesian IMCI team that we might order materials. We ordered 20 sets, we sent money, but none came... no communication. We had never received the materials... we felt ignored. We had been very enthusiastic, but then...

We did not work for money, but there should be, at least, some materials for the students. As IMCI were not in the curriculum of the medical education, the dean said there were no funds allocated for it...”

“...we haven’t been teaching IMCI since the tsunami hit us in 2005. Everything gone, all the books and IMCI teaching tools and files were swept away by the flood. The only thing left is what was hanging on the wall [the wall chart]... We are very happy that you (referring to the visitation team) come for revitalization. Our commitments remained. Although there are only 8-10 of us, we are ready to begin again...”

Excerpt from interview with heads of Child Health Departments

“IPS (Indonesian Paediatric Society) should be involved actively... they should take part... If they don’t... difficult. The collegium [of paediatric education] should coordinate...”

" Maybe in 2000 IMCI was no longer taught in our medical school. I think it’s probably because of [loss of] the communication ....[with the centre, i.e. IMCI Team of the Indonesian Paediatric Society]. After that, IMCI has just disappeared."

"... at the time when the commotion about developing a competence based curriculum was going on, the IMCI team played a very small role in it, maybe even not at all...”

Excerpt from interview with a dean

" I think it’s because IMCI is not something crucial and of priority..so with other activities and curriculum to think of, IMCI finally ended [in this school]. "

Box 2. Comments from deans

Regarding IMCI:

" If the concept of IMCI is well explained... and we understand the benefit, we, as the head of this faculty can insert this into the curriculum.”

"I think it is acceptable. We will ask the Child Health Department, what materials [will be taught], thus, can be inserted [in the medical curricula]. Fortunately, we have a block named Health Systems Base which was organized by the Public Health Department. IMCI can be put there, since the one thing discussed (in IMCI) is primary health care. IMCI can improve this block system. This block will be enriched...”

“This approach is very appropriate.... it matches very much [with our needs]. It’s just how are we going to introduce it to the [medical] educational system. That is still the question.”

"We don’t just support, I mean it should be implemented as soon as possible....”

" ...this block system is wide open, Sir. Therefore, we can use the concept bottom-up. If there is necessary idea to be inserted, essential for the Child Health Department,
we will try to accommodate. We will try to find where we can [insert IMCI]…"

**Regarding funds:**

“Money is not the most important things, commitment is... however, as what I used to quote: money is not our mission, but if there is money it will be a mission”

“I don’t think money will be a problem, just make a proposal, for example to train more instructors or whatever... and we will allocate funds or ask the university...”

“As long as it is within the limitation of our budget...and I think it is, money will not be a problem”

**Box 3. Views on IMCI Teachings**

**Encouraging views towards IMCI teachings:**

**Excerpt from interview with teachers**

"... I think it is important that we adopt the (IMCI) approach. By using the approach we can assess and manage patients thoroughly and in an integrated way.."

"...sometimes we (paediatricians in the top referral hospitals) are the 'trash bin' in the referral system. Physicians sometimes refer (patients) to us too late... or sometimes, they refer patients who do not need referral.... With IMCI, we hope physicians are able to assess more problems and refer more accurately.

"The strength of IMCI is for making early assessment accurately. This is for the first line of defence, for screening...to decide whether a patient can be managed or should be referred. Even if the diagnosis in the hospital may change...at least they [physicians] know when to refer and when not to refer.”

"All the topics in IMCI are suitable for the health conditions of Indonesia...”

**Excerpt from interview with head of a Child Health Department**

“Yes, the counselling...in IMCI, students learn how to approach a patient and give counselling on feeding and breastfeeding...This is very good.”

**Excerpt from interview with a student**

“This is a good approach... simple, easy to learn and to understand... The flow of the algorithm is clear, unlike the conventional methods which is highly dependent on individual competence.”

**Negative views towards IMCI teachings:**

**Excerpt from interview with a dean:**

IMCI is only a supplement for students; don’t make students stuck in a narrow-minded pragmatism.”

**Excerpt from interview with teachers**

“...there’s a saying going on that ‘MTBS’ [IMCI in Bahasa Indonesia] is ‘Mau TetapBodohSilahkan’ [if you want to remain stupid please go ahead]…”

"Not many staff member responded [to the IMCI]. Many still consider it superficial... that it can only be applied in remote locations...there’s also some staff members who thought of IMCI as degrading the mind...”

"Some of the staff members [mostly the professors] disagree because things are too simplified in IMCI...for example, they wanted to know why we used only fast breathing to classify pneumonia, why we used co-trimoxazole instead of amoxicillin...they needed to know the evidence behind every decision... not just the algorithm."

I think IMCI is simple and complete, it leaves nothing behind... the problem is, most of the time students fill in the IMCI form and make right classifications without understanding the meaning [the pathogenesis, the diagnosis]... for example, “cough: no pneumonia” what is it? What can the diagnosis be? Why is fast breathing used to classify “pneumonia”?, is it always really a “pneumonia” [in diagnosis sense]? Students cannot answer such questions.

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