

A photograph of three surgeons in an operating room, wearing blue scrubs, green surgical caps, and masks. They are focused on a patient lying on a table, covered with a green drape. The scene is brightly lit, and the surgeons are using various surgical instruments. A yellow banner is overlaid on the left side of the image, containing the main text.

**Ripe for investment:
the Indonesian
health care industry
post introduction
of universal health
coverage**

The EY logo, consisting of the letters 'EY' in a bold, white, sans-serif font. A yellow triangle is positioned above the 'Y'.

Building a better
working world



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Foreword

Making a difference

Recent developments in the Indonesian health care sector, as well as the push toward integration in the ASEAN Economic Community (AEC), offer exciting possibilities for partnerships and investments in the Indonesian health care sector at the early stage of its growth curve.



Thomas Wirtz
Partner, Transaction Advisory Services
EY Indonesia

Indonesian health care: a snapshot

Many of us take access to reliable health care for granted, with the World Health Organization (WHO) calling it “a basic human right.” Yet about 150 million people globally suffer financial catastrophe each year, and 100 million are pushed below the poverty line, as a result of having to pay for health care.

Indonesia does not rank on par with its Association of Southeast Asian Nations (ASEAN) neighbors with regard to health care, based on measures such as the numbers of hospital beds, physicians, nurses and midwives per 1,000 people. Its maternal mortality ratio is among the highest in the world.

In 2013, 31% of Indonesia’s population of more than 250 million was uninsured; 61% were government-insured and just 8% enjoyed private health insurance. However, at the beginning of 2014, the Indonesian Government introduced mandatory universal health coverage (UHC), locally known as JKN and administered by an agency known as BPJS. In doing so, it demonstrated its commitment to the goals of the Millennium Declaration that it had signed in September 2000.¹

Since the beginning of 2014, the focus of EU development aid for Indonesia has moved from health to other sectors such as education and human rights. Aid from international agencies, such as vaccines for infants, has also been reduced. The implementation of UHC in Indonesia is therefore timely.

There are already more than 140 million participants in Indonesia’s UHC system. Some critics doubt that the Indonesian Government can attain its goal of publicly insuring all Indonesian citizens and residents by the end of 2018. However, the exciting point about UHC is that once it has been introduced, *there is no turning back* – as evidenced in other countries where it has been implemented.

The opportunity to be part of Indonesia’s development

Fellow ASEAN member Thailand offers a good example of how UHC can lead to the creation of a better public health service for a whole nation.

Health education, prevention, promotion and rehabilitation are all critical parts of strengthening the health care of a nation, particularly in rural areas, where many

cities have a population of more than 500,000. In such areas, 70% of childbirths occur at home, and the population widely relies on traditional medicine and self-medication, which partly explains why rural bed occupancy ratios are lower than in urban areas. Tuberculosis and HIV/AIDS are a huge burden, especially in the eastern part of the country.²

The health care landscape in Indonesia provides investors with both an interesting economic opportunity and the chance to “do good” by improving the living standards of many people. Investors can make a major difference in Indonesia through strategic investments, bringing in expertise, finding innovative solutions and putting down the foundations of a robust health care system for the future.

¹ United Nations Millennium Declaration signed on September 8, 2000, following a three day Millennium Summit of world leaders

² Franck Viault, Head of Cooperation at the EU delegation to Jakarta, speaking to EurActiv on January 28, 2015

Opportunities for investors

1. Enhancing health care areas and quality

One of the major obstacles to creating a quality health care system for the whole country is the severe lack of qualified specialists and nurses, especially in rural areas. The Indonesian Government has not yet enabled the development of qualified medical personnel (specialists, general physicians and nurses) and instead introduced new non-tariff barriers to protect the monopoly of local doctors. Foreign doctors are also prevented from practicing in Indonesia until the end of 2015. Several hospital operators interviewed for this study concurred that the shortage of qualified personnel is a huge problem, especially in high-skill fields such as radiology.

However, Romeo Lledo from Siloam Hospitals Group predicts, "In the long term, Indonesia will eventually open medical practice to foreigners due to the current implementation of the AEC in the region."

For investors, the AEC could herald the first opportunity to set up quality hospitals staffed by experienced and skilled physicians, nurses and midwives,

through better compensation packages, in-house postgraduate training programs and joint ventures with centers of excellence in the region. Local investors have already discovered such opportunities and are aggressively expanding hospital provision. An estimated 15,000 hospital beds will be added by 2017, though this is merely a drop in the ocean given that at least 500,000 beds are needed.

2. Finding innovative solutions

Profit margins in the health care and life sciences industries are still high by international standards but have come under pressure from low UHC rates, which are often below cost. A hospital operator catering solely to private clients had reported a fall in both in- and out-patient numbers, especially in maternity and dialysis, where treatment fees can run to large sums. This operator, however, remains optimistic about the prospects, as UHC does not give patients a choice, the productivity of UHC patients is low (due to long waiting times) and hospitals accepting UHC patients are often overcrowded. The challenge is to create flexible and attractive packages to attract these patients back into private health care, the operator believes.

Several hospital operators have responded to the UHC price pressure by developing "tandem" hospitals (private and UHC) to unlock potential from shared equipment, facilities and management. These tandem hospitals have a higher conversion rate (from out-patient to in-patient), which translates into higher profitability through increased out-of-pocket (OOP) spending compared to hospitals serving private patients only.

3. Management expertise can make a difference

Apart from the severe lack of qualified and experienced medical personnel, the Indonesian health care sector is also struggling with a shortage of good management teams. This is where foreign investors can add real value and increase profitability: negotiating better deals (volume discounts and payment terms) and having a more efficient model to manage costs and working capital can have a significant impact on the bottom line.

A local hospital operator interviewed for this study laments that funding is easy to find, but a good management team is not.



4. Health care is a big sector

This study focuses primarily on hospitals but the health care sector encompasses many other symbiotic players, which we will be covering in future publications. An example is the pharmaceuticals industry, whose business is closely entwined with the hospitals, and vice versa. For example, up to 50% of the revenues of a hospital can come from sale of medicines to its patients. Pressure on margin from UHC patients affects manufacturers of generic drugs.

“Private hospitals offering UHC services are increasingly putting pressure on manufacturers of generic drugs, arguing that no price differentiation should be made between drugs sold to private and public patients,” Dr. Frederic Morier, President Director of generics manufacturer Sandoz said in an interview with EY Indonesia.

Joyce Handajani from hospital operator PT Mitra Keluarga Karyasehat Tbk (Mitra Keluarga) comments, “Drug procurement is key in managing our profitability, and the focus should be on value, not volume.”

Another example is the medical equipment industry. Players such as Siemens Indonesia (Siemens), currently serving niche segments, are considering entering the medium- to low-end product segments. However, apart from widening the current geographic reach to promising regions such as Sulawesi and adding to their sales force, funding is critical to achieve this goal.

It is our belief at EY Indonesia that there are still healthy returns to be made in the health care sector in Indonesia, if business plans are underpinned by sound strategy. This country is after all one of the most populous nations in the world and has a

high percentage of young people reaching working age. The sector is on the rise, with the local players being the most dominant still, and as with all nations, health care is a critical part of its future. Handajani says, “People in general, especially in the cities and the younger generation, they now know more about health care because of BPJS (UHC).”

According to the 2015 Frost & Sullivan Health care Outlook, the Indonesian health care sector is expected to triple from US\$7 billion in 2014 to US\$21 billion in 2019.

I am very excited by the prospects for this sector, and I welcome the opportunity to discuss this report with you personally in more detail.

“People in general, especially in the cities and the younger generation, they know now more about health care because of BPJS (UHC).”

Joyce Handajani, Mitra Keluarga

Executive summary

Indonesia's spending on health care is one of the lowest in ASEAN. The country requires significant investment to expand and upgrade its poor health care infrastructure.

Indonesia's health care system is unable to adequately service its population of more than 250 million, due to a severe lack of qualified physicians, nurses and hospital beds. The country has one of the lowest levels of spending on health care in ASEAN. Thus, its health care infrastructure is in a poor state and requires significant expansion and upgrading.

The recent introduction of Indonesian Government-supported Universal Health Coverage (UHC) for all citizens and residents provides opportunities for investors to develop the health care sector.

The new Indonesian Government-supported UHC system – locally known as JKN, and administered by an agency known as BPJS Health – will provide all citizens and residents with access to basic health coverage by the end of 2018. Although there are challenges, the new scheme offers opportunities for investors to play a role in developing affordable health care in Indonesia. Some 140 million Indonesians have already enrolled in the new scheme which increases access to and affordability of health care for low-to-middle income patients, through subsidies and a Coordination of Benefits (CoB).

The rising middle class is expected to drive demand for affordable health care.

To benefit from an increased demand for affordable health care, investors should carefully survey the needs of the low- to middle-income class and focus on strict cost management and resource sharing with other hospitals.

"With UHC, the poor and near-poor will definitely go and seek treatment if they get sick, and we expect to see growth in terms of value and also revenues. Current UHC contributions are between 5% and 7% of revenues but going forward, the Group expects contribution from UHC to be up to 12%," says Romeo Lledo of Siloam Hospitals Group, an owner-operator of 20 hospitals in Indonesia.

Even those who could afford private health care, would opt for some treatments under the UHC because private insurance claims have a ceiling, while UHC does not.

The rising middle class, with its rather unhealthy lifestyle, is expected to drive an increase in lifestyle-related diseases.

Lifestyle changes within the rising middle class, and the fact that more than 60% of Indonesian men smoke, will lead to more lifestyle-related diseases such as cardiovascular disease, tuberculosis and cancer. The national maternal mortality ratio (190 per 100,000 live births) is among the highest in Southeast Asia, although wide variation exists across the regions, both within Indonesia and ASEAN. The WHO predicts that by 2030, lifestyle-related diseases will be the main cause for 87% of deaths.³

³ World Health Organization, Indonesia NCD profile 2014

Before the introduction of UHC in 2014, Indonesia spent only 3.1% of its GDP on health care in comparison to the Philippines (4.4%) and Thailand (4.6%).

Source: World Bank and OECD

Indonesia faces a shortage of hospitals, with rural areas being most severely underserved.

Indonesia's health care facilities are expanding year by year – but require significant further expansion and upgrading. Currently, there are approximately 2,200 private and public hospitals, with one of the lowest bed-to-population ratios worldwide (0.8 per 1,000 inhabitants in 2012). Conservative estimates suggest that Indonesia needs an additional 500,000 hospital beds. The country as a whole lacks a robust health care infrastructure and qualified staff, particularly in rural areas. Health care development in urban areas, where 60% of the population resides, has driven high demand and bed occupancy, while rural areas remain underserved.

Foreign investors are allowed to operate specialized hospitals in a market where only 23% of hospitals are specialized.

By law, foreign investors are restricted from operating general hospitals but are allowed to hold up to 67% of shares in a specialized hospital. Maternity hospitals are also closed to foreign investors.

67% of Indonesian adult males are cigarette smokers which is likely to be a significant cause of lifestyle-related diseases.

Source: World Health Organization

Building a new hospital from scratch is difficult, due to a lengthy and complicated licensing process. This barrier to entry attracts investors to existing small hospitals that have the potential for improvements.

Building a new hospital takes around three years, largely due to a lengthy licensing process. Goodwill, prior relationship with the Indonesian Government and an established patient base are other contributory factors as to why existing small hospitals are being targeted by investors who wish to get involved in this sector. However, acquiring smaller hospitals comes with its own challenges, as some have a very complicated shareholder structure, outdated management practices and an existing culture that is difficult to change.

Qualified doctors and nurses are in high demand, but the education system has yet to increase its capacity.

Developing and retaining qualified doctors to support the growth in health care is a key concern for the industry. There is a long and expensive study period, earning prospects are rather low compared to other professions in the early years, there is a shortage of training facilities and an exclusive professional culture among doctors. Such factors mean there are only a small number of graduate doctors and specialists, for example, in the field of gynaecology. Nurses are available in sufficient numbers, but relatively few have sufficient skills due to low grade training.

The AEC could address the lack of qualified doctors, but new barriers are making it harder for foreign doctors to practice in Indonesia.

The launch of the AEC at the end of 2015 is likely to help mitigate the shortage of doctors in Indonesia, because it will improve mobility of doctors from other ASEAN countries. However, the Indonesian Government has recently introduced new barriers to protect the local labour market, and regulations ban foreign doctors from gaining automatic right to practice in Indonesia – they have to pass the board exams and language test administered by the Indonesian Medical Council (KKI).⁴

“In the long-term, inflow of foreign doctors will happen. Indonesia will eventually open the practice to everybody as otherwise the health care system will be left behind,” observes Romeo Lledo from Siloam. “The country needs not only doctors and nurses but also non-clinical staff such as hospital administrators.”

A high conversion rate of hospitals serving UHC and private patients can translate into higher profitability through increased out-of-pocket spending and it can help shorten ramp-up time.

UHC fees are low and, in some cases, below cost, which lowers margins for hospitals in the UHC network and necessitates careful management of costs and working capital. Selected experience shows that a high conversion rate (from in- to outpatients) of hospitals serving both UHC and private patients can translate into higher profitability through increased out-of-pocket (OOP) spending compared to hospitals serving private patients only. Anastasia Trivena from Siloam adds, “Based on our experience, a hospital catering to both UHC and private patients shortens our ramp-up period of 5 years to 3 years to reach 80% utilization rate of the hospital’s full capacity, hitting 30% EBITDA margin in 3 years instead of our original model of 5 years.”

⁴ Indonesia Medical Council Regulation No. 7/2012 regarding the management of the adaptation program for overseas-educated doctors and dentists.

“A forecast GDP growth of above 5% per year and the rising middle class will inevitably drive the demand for affordable health care.”

Thomas Wirtz, EY

The Indonesian Government is committed to supporting the UHC scheme.

BPJS Health, which administers UHC, has realized deficits – mainly due to a higher than anticipated claims ratio of 104% vs. a budget of 90%. That said, the Indonesian Government has shown its commitment to the UHC scheme, as demonstrated by recent additional contributions to fund BPJS Health’s deficits. Other countries’ experiences suggest that once UHC is implemented, there is no way back for governments. However, to manage the rising costs of BPJS Health, waiting periods (after registration) will be extended or benefits might be reduced in the future, even though BPJS Health is currently of the view that social benefits should not be reduced.

BPJS Health premiums are likely to increase.

Health insurance premiums for BPJS Health are likely to rise in 2016. BPJS Health has already asked the House of Representatives for an increase, however, approval is subject to the results of an ongoing audit by a commission of the House of Representatives. Increased premiums would add costs to employers, but also put pressure on the federal budget.

“Registration with BPJS would require that a hospital allocates 20% of its total beds to mid- and low-income patients. Thus, serving BPJS patients is a low margin but high volume business and is attractive at the bottom line, if managed well.”

Board Member, Kemang Medical Care

About this report

This report was prepared approximately 18 months after the introduction of universal health coverage* (UHC) in Indonesia in January 2014.

Its findings are based on an analysis of UHC and the health care system in Indonesia, and on interviews with various health care providers and EY experts, focussing primarily on the hospital sector.

Our thanks are due to the following for their time and insights in compiling this document (in alphabetical order, by surname):

Joyce Handajani, Chief Financial Officer, Mitra Keluarga Hospitals Group (Mitra Keluarga)

A. Heri Iswanto, PhD, Director of General Affairs, Kemang Medical Care (KMC)

Romeo Lledo, Group President Director, Siloam Hospitals Group (Siloam)

Dr. Frederic Morier, Country Head, Indonesia, Sandoz

Dr. Muhammad Nurussalam, Senior Manager of Health Services Cooperation, Hermina Hospitals Group (Hermina)

Anastasia Trivena, Investor Relations Manager, Siloam Hospitals Group (Siloam)

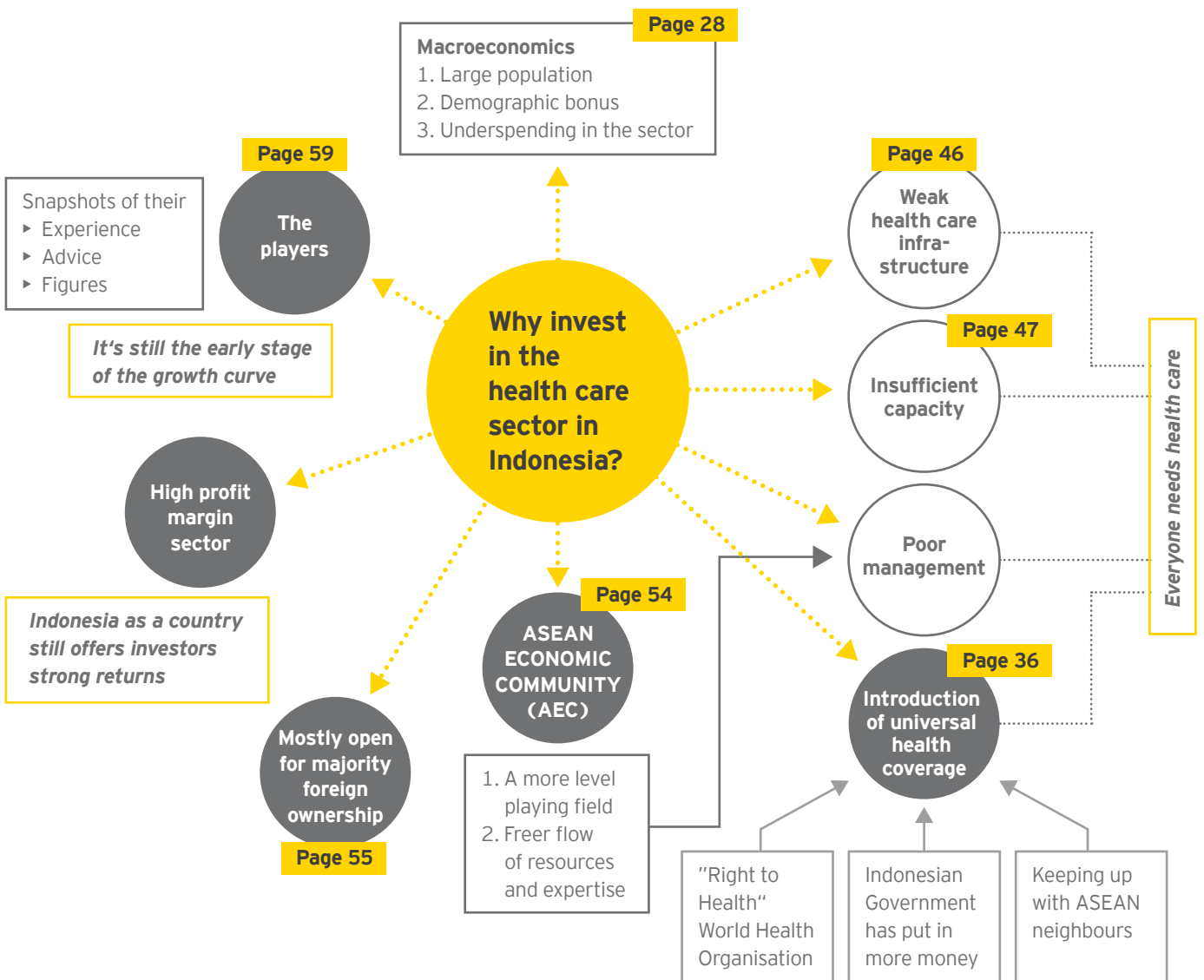
Dr. Stefanus Widananta, Health care Country Lead, Siemens Indonesia (Siemens)

“This study focuses primarily on the hospital sector.”

Thomas Wirtz, EY Indonesia

* Universal health coverage (UHC) is defined by the World Health Organization (WHO) as a situation in which all people have access to promotive, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying for these services.

Summary for investors





I. Five tips for foreign investors on how to benefit from the growth of the Indonesian health care sector

Indonesia undoubtedly provides opportunities to participate in the growth of the health care sector. But how can foreign investors benefit from this growth and what do they need to watch out for? From our research, we present the following five tips:

1.

Focus on specialized
affordable
health care

2.

Form partnership
with locals

3.

Start in
second-tier cities

4.

Invest in
good doctors

5.

Watch your costs
and working capital
requirements



1. Focus on specialized affordable health care

Foreigners are restricted from ownership in general hospitals. The upper middle class (as a % of total population) has risen significantly from 0.3% in 2003 to 1.5% in 2010. However, high-end private specialized health care remains a niche market in Indonesia and competes with medical tourism to other ASEAN countries. Until the quality of medical professionals is upgraded and the perception on the quality of health care by rich Indonesians changes, only selected opportunities are seen.

With the introduction of UHC:

- a) Scale has become even more important. "Hospitals have started to maximize their utilization through better roster management. Additionally, most of my hospital clients are planning to add approximately 20% to 30% bed capacity within the next one to two years," says Sahala Situmorang, Partner at EY Indonesia. "Scale is important because it lifts profitability, as the main costs associated with running a hospital are fixed in nature. It will also help to attract doctors [through the ability to pay higher salaries]," he adds.
- b) Small specialized clinics provide entry points to tap UHC patients and the opportunity to convert them into high-margin private patients. Conversion data remains limited at this stage, but large players, such as Siloam, have already started to develop mini emergency hospitals located at shopping malls for faster access and to benefit from referrals to their larger hospitals (refer also to the interview with Siloam in this report).

“Scale is important, because it lifts profitability, as the main costs associated with running a hospital are fixed in nature.”

Sahala Situmorang, EY Indonesia

“The Indonesian Government is fully committed to UHC.”

Romeo Lledo, Siloam

2. Form partnership with locals

Experience has shown that setting up a new hospital business in Indonesia can take more than three years. This is mainly attributed to lengthy processes for the application of hospital licenses and land permits. The new Indonesian Government has recently introduced a new “one-stop-shop” to make it easier to start a business. However, opening and operating new hospitals and clinics without a local partner remains a challenge in Indonesia.

Local partners often have much to offer, especially in terms of knowledge of the industry and the client base. In many cases, hospital directors are former doctors who chose the management route instead of specialization, and have between 10 to 15 years’ experience of working in the hospital.

“When selecting a local partner, investors should have a clear road map and think how they can add value,” says Sahala

Situmorang, Partner at EY Indonesia. “My discussions with local hospital operators show that capital is not a major concern. Why? Particularly after the introduction of UHC, the Indonesian banking sector sees health care as an attractive industry but still has limited experience. A CFO of a public hospital whom I recently spoke to told me that before joining the hospital, he was CFO of a mining company. He noticed that while the mining sector was favored by banks five years ago, health care is now the ‘new darling’ and bankers are ‘queuing up’ to provide funding.” This is not surprising: Indonesia has spent more than US\$3 billion on UHC in 2014, and banks see opportunities for the health care industry to benefit from this spending. However, they lack experience when it comes to the financing of medical equipment.

For foreign investors, what is more important than investing capital into the venture is to bring in much-needed

hands-on hospital management capabilities. Lack of experienced management teams in this fast-growing market provides great opportunities for an investor who has this capability and experience to bring in: a good management team will be able to unlock a wealth of unrealized profits through better utilization of capital (more effective scheduling of operating theatres, doctors’ time and bed occupancies), negotiating better terms (volume discounts) with suppliers and better cost management.

Sahala Situmorang gives an example: “A hospital client replaced its management by a professional CFO who turned around the loss-making hospital group into a profitable business within the space of one year.”

“Health is based on trust.”

Romeo Lledo, Siloam



3. Start in second-tier cities

Our research shows that Indonesia faces a shortage of hospitals with rural areas being the most severely underserved. Second-tier cities, such as Palembang or Batam, with comparably low bed-to-population ratios, provide good opportunities for investments. We expect profitability of hospitals to be more attractive in second-tier cities, due to the bigger supply-demand gaps and lower land acquisition costs compared to first-tier cities such as Jakarta.

“The shortage of doctors is challenging. In particular, when it comes to the development of new hospitals in second-tier cities,” Joyce Handajani from PT Mitra Keluarga Karyasehat Tbk, an owner-operator of 11 solely private hospitals in Indonesia, says. However, once good doctors are recruited and modern medical equipment procured, bed occupancy is likely to improve.

Bed occupancy is further driven by the introduction of UHC. Combined with low land acquisition costs and a bigger

supply-demand gap, establishing hospitals in rural areas is proving to be an attractive proposition. Large hospital groups, including Siloam, are focusing their expansion plans on second-tier cities due to the favorable prospects, including lack of competition, because smaller players tend to concentrate their expansion plans on major cities as they face difficulty attracting doctors in second-tier cities (due to the low buying power of the local population and insufficient revenue-per-patient).

“Due to UHC, there is an increase in the utilization of hospital equipment and facilities with sunk costs, thus, revenues over direct cost will add to the overall profitability of the hospital.”

Romeo Lledo, Siloam



4. Invest in good doctors

In a market with a severe lack of qualified doctors, investors need to recruit and retain good doctors, in particular, specialists who play an important role in upholding the standard of care and reputation of a hospital, which are ultimately profit-drivers in the business.

Joyce Handajani from Mitra Keluarga has the following strategy on recruiting and retaining good doctors:

- 1. Cooperate with universities and take on doctors before they graduate.**
- 2. Provide access to high quality medical equipment and training.**
- 3. Provide flexibility and support for specialists to continue working in other (overseas) practices, research centers or universities.**

"I don't think the AEC will help mitigate the shortage of doctors in Indonesia (by allowing doctors from other ASEAN countries to practice in Indonesia) in the next few years because of the barriers to entry imposed by the Indonesian Government. However, investors whose strategy is to gain competitive advantage in the sector through developing hospitals with world-class medical care should monitor the developments closely," Thomas Wirtz, Partner at EY Indonesia, says.

"I don't think that the AEC can help mitigate the shortage of doctors in the next few years. However, investors should monitor the developments closely."

Thomas Wirtz, EY Indonesia

5. Watch your costs and working capital requirements

Sound management of costs and working capital is essential in this sector. Though a majority of publicly-listed hospital players have reported EBITDA margin of up to 33% (EBITDA to net revenue margin) in the last five years, hospital operators still need to maintain a strong hold on cost and capital. This is highlighted in the case of Mayapada Hospitals Group, which shows that though EBITDA margins were high, profitability can fall quickly (see section “Selected private hospital players” in this report).

Additionally, the introduction of UHC has put pressure on cost and working capital

requirements of hospital operators. Larger hospital operators can absorb this pressure, because business from UHC patients still represents a small proportion of the overall revenues and because they benefit from economies of scale, for example when purchasing consumables. “We have reduced the number of drug formulary from over 8,000 to 2,500 items to benefit from higher volume discounts from suppliers but also to improve our working capital requirements,” Romeo Lledo from Siloam says. Smaller hospital or clinic operators, in contrast, have to be extra careful in managing costs and working capital requirements, particularly when

they cater mostly to UHC patients as they tend to benefit less from economies of scale.

However, despite these challenges, even smaller hospitals remain optimistic about UHC. “Because of an expected higher utilization of our hospital and a fast verification and settlement process of BPJS Health taking about two weeks, we are considering to expand our private hospital operations toward new sister hospitals catering to BPJS patients,” A. Heri Iswanto, Director of General Affairs at Kemang Medical Care, a specialist hospital for women and children in Jakarta, says.

“The key factor is cost management involving the proper allocation of equipment utilization and doctor participation on the program which is unique to Siloam and is important to achieve our profitability targets.”

Romeo Lledo, Siloam

“At Mitra Keluarga, full-time doctors are usually young specialists who have minimal experience, but they build their patient-base together with Mitra Keluarga. Full-time specialists represent less than 20% of all specialists and they only practice at Mitra Keluarga. They bring in between 50% and 60% of total patient volume, and patient satisfaction is high because our doctors have more time to spend with them.”

Joyce Handajani, Mitra Keluarga



II. Catching the wave: key players share their experience and advice

The Indonesian hospital sector provides a platform for foreign investors bringing in expertise and capital to work in partnership with local players contributing market insights and relationships.



**Siloam
Hospitals
Group**

**Mitra
Keluarga
Hospitals**

**Kemang
Medical
Care**

Siloam Hospitals Group – the largest hospital operator in Indonesia catering to private and BPJS patients

Siloam Hospitals Group (Siloam) is the largest hospital operator in Indonesia with 20 hospitals and 3,900 beds catering to private and BPJS patients. Siloam's vision is to provide "accessible and affordable world-class medicine to all Indonesians," Romeo Lledo, President Director of Siloam, says. Therefore, the introduction of UHC did not change Siloam's overall business strategy. Four years ago, well before the introduction of UHC, Siloam had already opened a hospital in Karawaci catering to near-poor and poor patients, both public and private.

Siloam's business model focuses on quality and scale to benefit from a higher utilization of their hospitals, which in turn helps to manage profitability as most of the operating costs of a hospital are fixed in nature. While scaling up its operations, Siloam has also developed centers of excellence in anticipation of a trend toward specialization once scale has been achieved, for example establishing specialist cancer centers. Since the introduction of UHC, Siloam has focused on cost management to achieve its profitability targets. Another revenue

stream, but one that is also a cost driver, is consumables, such as drugs. "Our experience is that Siloam's procurement department is clearly focused on costs and has the last say when it comes to orders," a supplier of medical supplies observes.

Siloam is planning to open 40 new hospitals outside of metropolitan Jakarta and 5 additional hospitals in Jakarta by end of 2017, all catering to private and BPJS patients. Siloam's expansion plan faces challenges, such as ensuring consistent quality due to a scarcity of qualified medical personnel (particularly in second-tier cities), but through its sizeable in-house training facilities, collaborations with local and international universities and an increased use of telemedicine, Siloam is equipped to deal with the challenges it faces.

Romeo Lledo is optimistic about the future of UHC in Indonesia. He predicts that UHC will increase its network and volume since the Indonesian Government, as previously announced by Indonesia's President Joko Widodo, will mandate private hospitals to participate in UHC in the future. Despite UHC for all Indonesians by the end of 2018, Romeo Lledo is convinced that the private hospitals business will not change because benefits, such as the free-choice of doctors, reduced waiting times and single occupancy rooms, will continue to draw patients to private hospitals.

Mitra Keluarga Hospitals Group – a hospital operator serving private patients

Mitra Keluarga Hospitals Group (Mitra Keluarga) is a hospital operator with 11 hospitals and 1,647 beds located in Greater Jakarta, Surabaya and Tegal. On March 9, 2015, Mitra Keluarga raised more than US\$300 million from its initial public offering of shares.

It caters exclusively to private patients, and is currently not serving BPJS patients. Previously, Mitra Keluarga tried to open a wing in one of its hospitals to UHC patients, but BPJS Health required the entire hospital to be made available to UHC patients, which Mitra Keluarga did not want.

Its expansion plan of 11 hospitals is focused on the affluent Greater Jakarta area and Surabaya, which have a better supply of doctors. "In Jakarta 0.88 doctors serve 1,000 patients compared to a ratio of 0.3 in rural areas," says Joyce Handajani, Chief Financial Officer of Mitra Keluarga.

Mitra Keluarga believes that a mandatory acceptance of BPJS patients by private hospitals as recently announced by the Indonesian President will significantly drive up costs and claim ratios, as services are used when they are offered.

"Scale is important because it helps hospitals to attract doctors."

Sahala Situmorang, EY Indonesia



Handajani suggests that the discussions between BPJS Health and the private insurance industry on the Coordination of Benefits (COB) between private insurers, BPJS Health and hospitals should move forward and a regulation on the implementation of COB should be issued soon because “we would like to offer COB to our patients but the absence of a clear regulation passes too much reimbursement risk to private hospitals.”

In the first quarter 2015, year-on-year, Mitra Keluarga had witnessed a decline in out- and in-patient numbers due to patients migrating to BPJS Health, but Handajani believes that this trend will be reversed once patients and companies see the benefits of quality services and higher productivity that private hospitals offer.

Handajani is confident that the profitability of Mitra Keluarga will remain stable in the next five years. However, this requires tight cost management. “Apart from the doctors, we need to manage the procurement of pharmaceuticals. Between 45% and 50% of our group’s total revenues are generated from pharmaceuticals. Therefore, we need to be good at managing the corresponding costs,” she says.

Kemang Medical Care – a private specialist hospital for women and children planning on developing the tandem hospital model

Kemang Medical Care (KMC) is a private specialist hospital for women and children located in an affluent neighbourhood of South Jakarta. It has a capacity for 55 in-patients and has a range of specialist clinics operating on site offering services for mother-and-child wellbeing, including lactation clinic, parenting psychology, dentistry, nutrition and aesthetics. It caters exclusively to private patients and has no plans to open its existing facilities to UHC patients due to high real estate and other costs. Moreover, as a specialist center, it is exempt from having to allocate 20% of its total beds to public patients (Class III).

KMC has a business model that focuses on quality and safety and the management is constantly working on improving standards, ranging from attracting more qualified experts to practice on its site, to weekly training sessions for its nursing and midwife staff. In an industry where up to 50% of

revenues can be derived from the sale of medicines, KMC practices rational use of medicine (RUM).

We previously interviewed a member of the KMC Board (EY Insurance Newsletter, February 2015), who shared his plans with us. He believes that UHC opens new opportunities for players like KMC, though the UHC business is of low margin but high volume.

KMC is looking to develop UHC hospitals outside central Jakarta, where they believe rents and fixed costs are lower. The hospitals on KMC’s radar are those in heavily-built up, middle- to low-income areas, currently under-performing because of poor management and poor facilities.

“With equipment sharing, we can make it happen,” the KMC Board member comments. “We will focus on the important things, like quality care, so that we are able to deliver the same quality care at a much lower cost. However, there are challenges that come with the opportunities, and we see management as one of the big challenges.”



III. Toward the next stage of development

A favorable macroeconomic environment, a rising middle class, comparatively low spending on health care and an increase in lifestyle-related diseases are all factors driving the demand for affordable health care.



**Macro
economics**

**Rise of the
middle class**

**Indonesian
health care
spending**

**Health
profile**



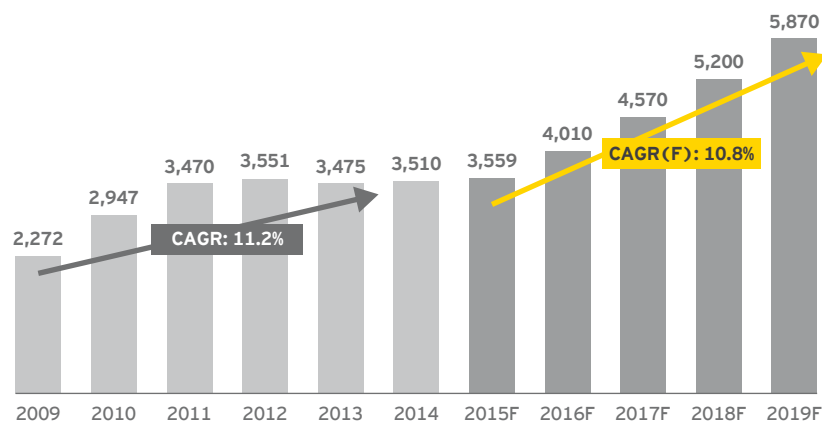
III.I Macroeconomics and the rise of the middle class

Indonesia, with its population of more than 250 million, is set to reach the next stage of its development. It is the largest economy in South East Asia: over the decade to 2013 its economy expanded by an average of 5.7% per year to a nominal GDP of US\$868 billion, according to World Bank statistics and the growth story is widely expected to continue.⁵

In its five-year forecast from March 2015, the Economist Intelligence Unit (EIU) predicts that Indonesia’s annual growth will remain above 5% between 2015 and 2019. Combined with the Indonesian Government’s low debt of less than 25% of GDP, means that the country is well placed to weather most shocks.⁶

Nominal GDP per capita grew at a compound annual growth rate (CAGR) of 11.2% between 2009 and 2013 to US\$3,475; the EIU predicts that it will rise at a CAGR of 10.8%, from US\$3,510 in 2014 to US\$5,870 in 2019, as illustrated in Chart 1.

Indonesia’s GDP per capita, 2009-2019 (US\$; 2015-2019 are forecasts) Chart 1



Source: EIU

Java and Bali, Kalimantan, Papua and Sumatra are Indonesia’s most affluent regions, with an average GDP per capita of more than US\$3,600 (2015 estimate; see Table 1). These regions benefit from relatively strong mining, agricultural and tourism industries. Less affluent areas, which include Maluku and Nusa Tenggara, are mostly located in eastern Indonesia, although the more affluent Papua is also in this region.

Estimated 2015 average GDP per capita by region, US\$ Table 1

Kalimantan	4,768
Java and Bali	4,711
Papua	4,289
Sumatra	3,607
Sulawesi	2,222
Nusa Tenggara	1,214
Maluku	1,055

Source: Indonesian Central Agency on Statistics (BPS), EIU and EY estimates. Estimates were made using forecast 2015 GDP (as per EIU), forecasted 2015 population figures, and the latest available GDP figures by province as per 2013 (see Appendix C).

⁵ World Bank Global Economic Prospects (December 2014)

⁶ CIA World Fact Book (updated late 2014)



The Indonesian middle class has become a major focus for investors due to its sheer size, increasing buying power and the fact that Indonesians are among the most confident consumers in the world, according to a Nielsen consumer survey published in May 2014.

There are different ways to define the middle class in Indonesia:

- ▶ The Asian Development Bank (ADB) defines the middle class as those with daily spending between US\$2 and US\$20.

- ▶ In its September 2012 study *The archipelago economy: unleashing Indonesia's potential*, McKinsey & Company (McKinsey) defines the "consuming class" as individuals with an annual net income of above US\$3,600 at 2005 purchasing power parity (PPP).

- ▶ In its 2013 study *Asia's next big opportunity: Indonesia's rising middle-class and affluent consumers*, Boston Consulting Group (BCG) defines the middle class as set out in Table 2.

Household expenditure in US\$ per month (to nearest dollar) Table 2

Classification	Monthly expenditure (US\$)
Poor	< 77
Aspirant	77 to < 116
Emerging middle	116 to < 154
Middle	154 to < 231
Upper middle	231 to < 385
Affluent	385 to < 578
Elite	578+

Source: BCG

The Indonesian middle class has become a major focus for investors due to its sheer size, increasing buying power and the fact that Indonesians are among the most confident consumers in the world.

Nielsen consumer survey⁷

⁷ The Nielsen Global Survey of Consumer Confidence and Spending Intentions' – Nielsen, May 2014

In summary, the trends concerning the middle class are as follows (see also Charts 2-4):

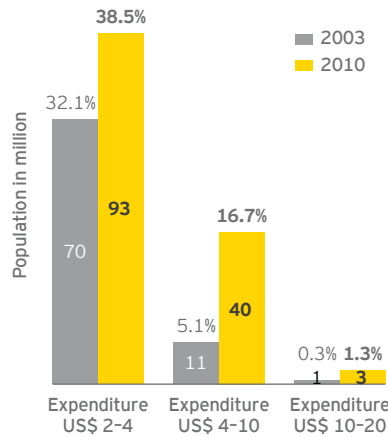
- ▶ The middle class grew from 82 million to 136 million between 2003 and 2010, as per ADB data.
- ▶ McKinsey forecasts that the “consuming class” will rise from 45 million in 2010 to 85 million in 2020.
- ▶ BCG estimates that the middle class will rise from 109 million in 2012 to 168 million in 2020.

Despite these different definitions, the McKinsey and BCG studies both show that the middle class in Indonesia will continue to grow, after a strong increase between 2003 and 2010.

This rising middle class with its increased buying power, combined with basic health coverage provided by UHC, will drive the demand for affordable quality public and private health care in Indonesia.

Rise of the middle class (2003 and 2010)

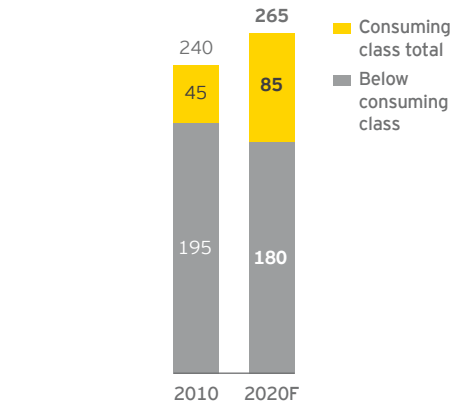
Chart 2



Source: World Bank and Asian Development Bank
Note: percentages refer to share of total population

Rise of the “consuming class” as forecast by McKinsey (2010 and 2020F)

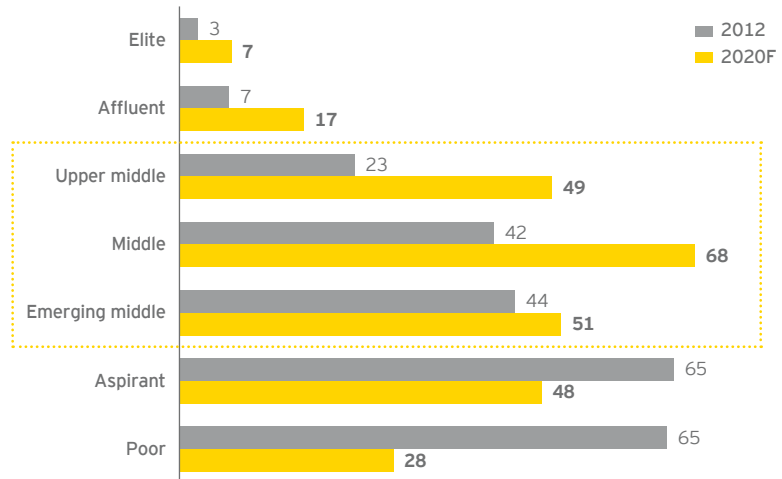
Chart 3



Source: McKinsey and Indonesian Central Bureau for Statistics (BPS); F – Forecast

Rise of the middle class as estimated by BCG (2012 and 2020F)

Chart 4



Source: BCG and Indonesian Central Bureau for Statistics (BPS); F - Forecast

“Given that the maternal mortality ratio is still high in Indonesia, there are opportunities for private hospitals to help reduce this number.”

Dr. Muhammad Nurussalam, Hermina

III.II Indonesian health care spending and health profile

Health care spending in Indonesia has not followed macroeconomic trends. Total public and private spending on health care, as a percentage of GDP is significantly behind the average for both ASEAN member countries and developed markets (see Appendix D). Public spending, in particular, lags behind the average for both ASEAN and developed countries, as shown in Chart 5.

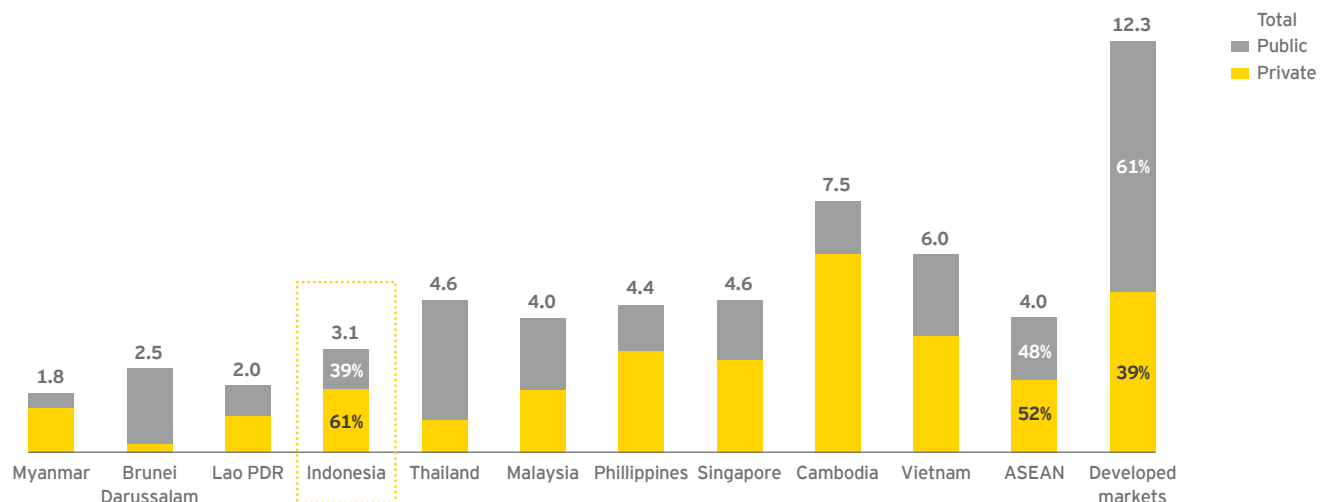
There has been a dramatic improvement in socio-economic indicators in Indonesia in recent decades. Despite relatively low health care spending, life expectancy in Indonesia was 69 years for males and 73 years for females in 2012. The under-five mortality rate (per 1,000) significantly declined from 84 in 1990 to 29 in 2013.

However, according to a statistical health profile of Indonesia released by the WHO in January 2015, there is still much room for improvement in the health situation of mothers, children and adults.

The maternal mortality ratio (190 per 100,000 live births) in Indonesia is among the highest in Southeast Asia, though wide variation exists across the Southeast Asian region. The World Bank estimates that the lifetime risk of a mother dying of causes related to childbirth in Indonesia in 2013 was one in 220 compared with one in 2,900 in Thailand and one in 1,600 in Malaysia.

Private and public health care expenditure (% of GDP) in 2013

Chart 5



Source: World Bank and OECD

Communicable diseases were once the leading cause of death in Indonesia but the proportion of deaths attributable to lifestyle-related diseases has risen, driven by changes in lifestyles. The WHO predicts that in 2030, 87% of deaths will be attributable to these diseases as a main cause, compared to 71% in 2014, as shown in Chart 6. Indonesia recorded 1.6 million deaths in 2014.

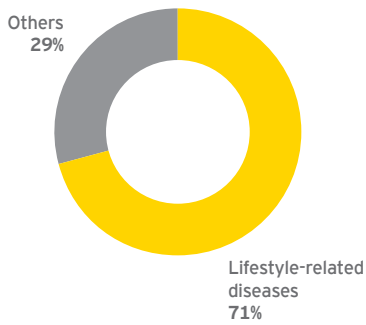
As seen in Chart 7, the leading cause of death in Indonesia for the year 2012 was stroke followed by ischaemic heart disease.

The high prevalence of tobacco use, especially among Indonesian adult males (67%) compared to Southeast Asian males (34%), is likely to be a significant cause of lifestyle-related diseases in

Indonesia, contributing to cancers and chronic respiratory diseases (see Chart 8).

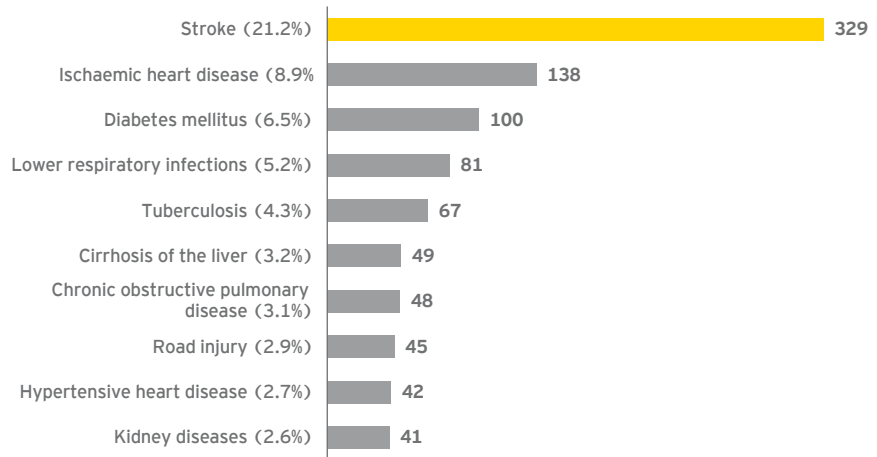
In response to its high mortality rates, Indonesia signed the Millennium Declaration at the UN Millennium Summit in September 2000 and committed itself to working toward meeting the UN Millennium Development Goals (MDGs).

Deaths caused by lifestyle-related diseases in Indonesia 2014 Chart 6



Source: WHO

Top 10 causes of death in Indonesia (2012, in thousands of people) Chart 7

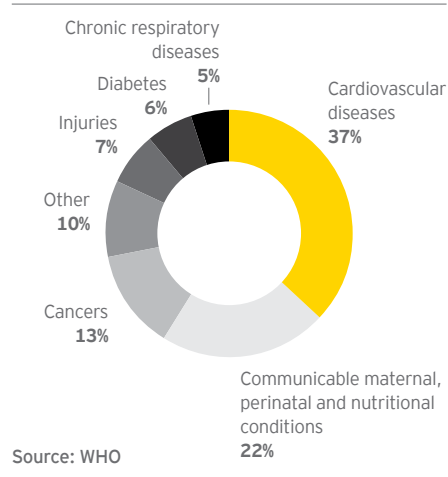


Source: WHO

These include the reduction of under-five mortality ratio by two-thirds and maternal mortality ratio by three-quarters by 2015, as per the 2011 MDG Report. While Indonesia is on track to achieving the former, a maternal mortality rate in 2013 of 190 per 100,000 live births means that the 2015 MDG of 102 per 100,000 live births is unlikely to be achieved, even in light of the introduction of UHC (as described in the next section).

Lifestyle-related diseases in Indonesia (2014)

Chart 8



“If health services are offered, they are used.”

Joyce Handajani, Mitra Keluarga



IV. Universal health coverage (UHC) in Indonesia

What investors need to know to facilitate decision-making.

**Indonesia's
five-year
UHC goal**

**Participation
of hospitals
and insurers**

**Referral
system**

Funding

**Case study:
Thailand**



EMERGENCY

IV.1 Indonesia's five-year UHC goal

On January 1, 2014, Indonesia launched its UHC program, locally known as Jaminan Kesehatan Nasional (JKN), to improve access to basic health care for Indonesians and to help achieve the UN Millennium Development Goals.⁸

The Indonesian Government envisages that UHC will cover all citizens and residents (who have lived in the country for at least six months) by January 1, 2019, as summarized in Chart 9.

Studies by Indonesian think-tanks Universitas Gadjah Mada (UGM) and Paramadina University (PU) from late 2014 suggest that Indonesia will probably miss this 2019 goal due the following main reasons:

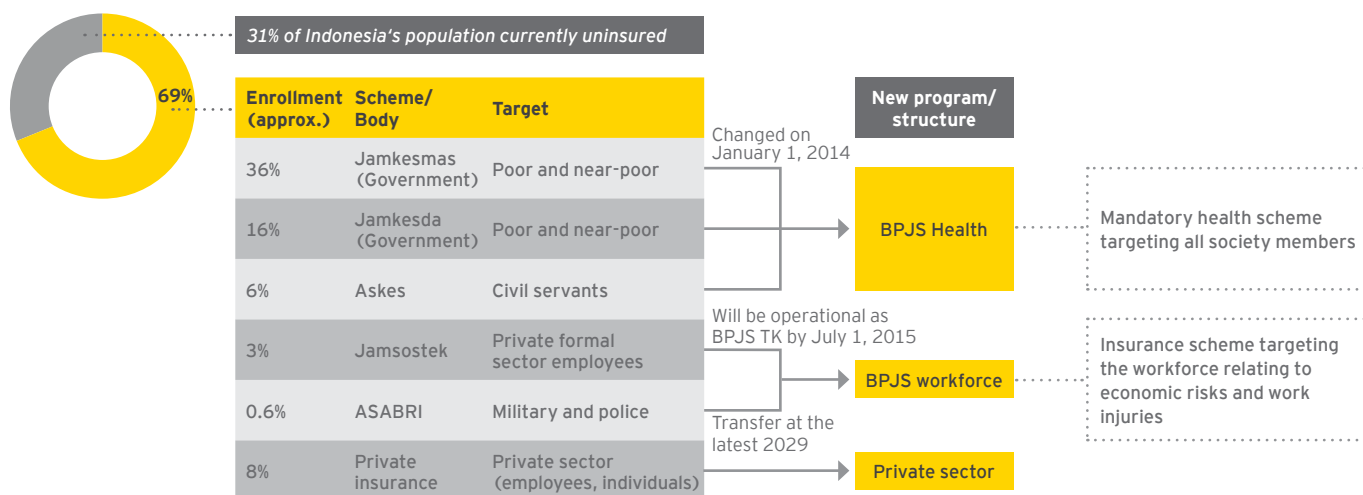
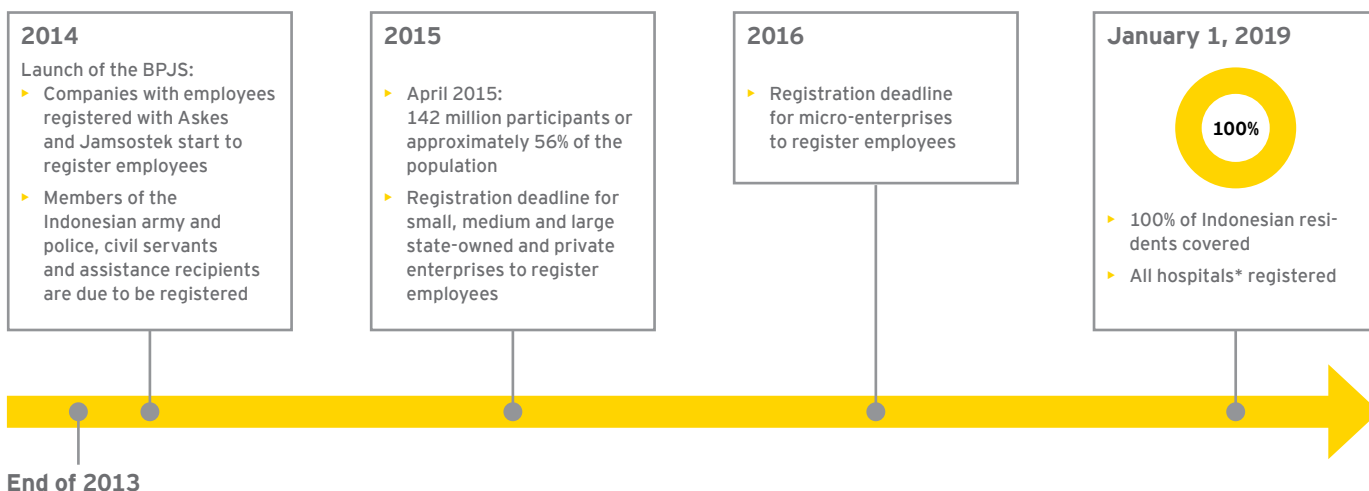
- ▶ UGM says there is a disparity in health care infrastructure and doctor numbers between developed and less-developed regions.
- ▶ PU believes there are regulatory weaknesses that exclude certain population groups from UHC. For example, newborn babies and unregistered low-income citizens are not automatically covered.

The UGM study predicts that only 7 of 33 provinces are expected to have full UHC by 2019, including Greater Jakarta, Yogyakarta, South Sumatera, West Sumatera, Central Java, East Java and South Sulawesi. According to the study, other provinces will be unable to achieve full UHC due to a lack of hospitals and doctors, preventing UHC participants from accessing health care.

⁸ UN Millenium Development Goals as per the United Nations Millenium Declaration signed by the Indonesian Government on September 8, 2000.

Introduction of UHC: timeline

Chart 9



*All hospitals refer to public hospitals (which must register with BPJS) and private hospitals which are not required to do so.

Source: BPJS website, Kompas, Tempo and Indonesian Public Health Insurance website

Note: Prior to the introduction of UHC, Indonesia's public health insurance landscape comprised of various schemes (e.g., Jamkesmas, Jamkesda, Askes) which will eventually be merged under the UHC scheme and administered by BPJS Health.

The fact that registration with BPJS Health is mandatory has raised concerns among companies and private insurance providers, who wonder whether the current public health infrastructure can adequately offer services similar to those offered by private health plans. As a result, in a highly competitive market for skilled labor, companies may incur double costs by participating in UHC while also maintaining their current health benefit plans.

IV.II Participation of hospitals and insurers

Public hospitals and insurers are automatically registered with BPJS Health. Registration of private hospitals and insurers is optional. However, this is going to change in the future as announced by President Joko Widodo in May 2015. According to an article from the *Jakarta Globe*, 617 private hospitals (44%) have already registered with BPJS Health as of February 2015 – though this definition of “private hospitals” includes both state-owned hospitals and privately owned hospitals (both nonprofit and profit-based).⁹ Meanwhile, BPJS Health stated that 51 private insurance companies (35.8%) had registered as of February 2015, and the number is rising.

There are concerns that the Indonesian Government funding is insufficient. Such concerns mainly focus on the level of government subsidy for health care for the poor, which is well below market cost. This shifts the burden on to health care providers, who may have to resort to compromising the quality of care and treatment or may not participate in the program at all, according to Professor Thabrany, Health Policy Professor from the University of Indonesia, speaking to the *Establishment Post* in November 2014.¹⁰

BPJS Health allows the Coordination of Benefits (COB) with private insurers, for health plans that provide coverage for a person who is also registered with BPJS Health. This aims to determine the respective payment responsibilities, that

is, which insurance plan has the primary payment responsibility and the extent to which the other plan will contribute when an individual is covered by more than one plan.

A template of a COB agreement was agreed by the joint teams of the Indonesian Life Insurance Association (AAJI) and Indonesian General Insurance Association (AAUI) and BPJS in April 2014. By the end of February 2015, according to a BPJS news release, 51 insurance companies had signed COB agreements, however, those signed agreements differ from each other and there are five versions. AAJI and AAUI are trying to harmonize the terms and conditions of COB agreements with BPJS for all insurers.

“It is important that the discussions between BPJS Health and the private insurance industry on the implementation of COB are moving forward, because it will allow us to participate in UHC.”

Joyce Handajani, Mitra Keluarga

⁹ ‘Health Care Operators Eye a Bigger Role in BPJS’ – *Jakarta Globe*, March 2015

¹⁰ ‘Inadequate Funding May Hamper Indonesia Health Insurance System’ – *Establishment Post*, November 2014

All BPJS hospitals and 28 private hospitals (as of January 2015) accept the COB scheme, which provides patients under additional private health coverage with a greater choice of hospitals. If no COB agreement is signed, the insurer can offer new products that complement the UHC scheme.

“We would like to offer COB to our patients, but a regulation on the implementation of COB has yet to be issued and it is unclear when this will happen. It is important that the discussions between BPJS Health and the private insurance industry are moving forward, because the absence of a clear regulation passes too much reimbursement risk to private hospitals. The critical discussion point is in relation to costly treatment to be fairly shared with private insurers who typically impose a ceiling on costs while BPJS Health has no ceiling,” Joyce Handajani from Mitra Keluarga says. An insurance market participant adds: “The issue is that BJPS Health wants to collect premiums first and then pass the appropriate proportion on to private insurances. However, private insurances are concerned that the chronic underfunding of BJPS Health might lead to a collection risk for private insurers.”

IV.III Referral system

UHC operates a cashless referral model. Refer to Chart 10 for an illustration of claim procedures.

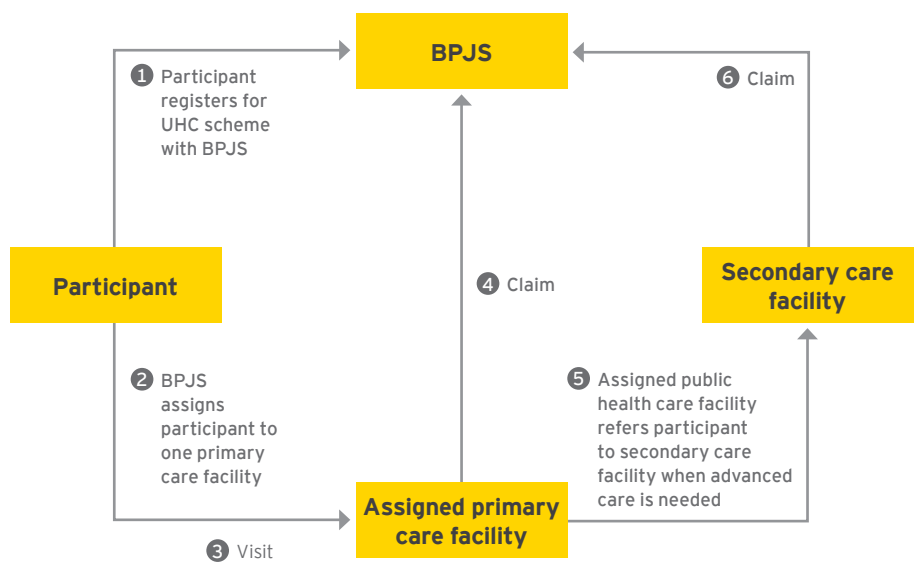
Members must choose a primary care facility from BPJS Health, usually a public health center such as an Indonesian Government-mandated community health clinic, locally known as Puskesmas. The first treatment must occur here unless it is an emergency. Secondary care is by referral from the

first level public health care facility, usually to a public hospital.

UHC has sparked complaints from participants, due to its rigid referral system that decreases flexibility in choosing health care facilities and reduces employees’ productivity. Travel costs can be high for employees who work in remote areas but are registered at only one distant first level public health care facility. Health risks can also result from delayed treatment, which can be driven by inefficient processes.

BPJS claim procedures (simplified)

Chart 10



Source: BPJS website and EY illustration

IV.IV Funding

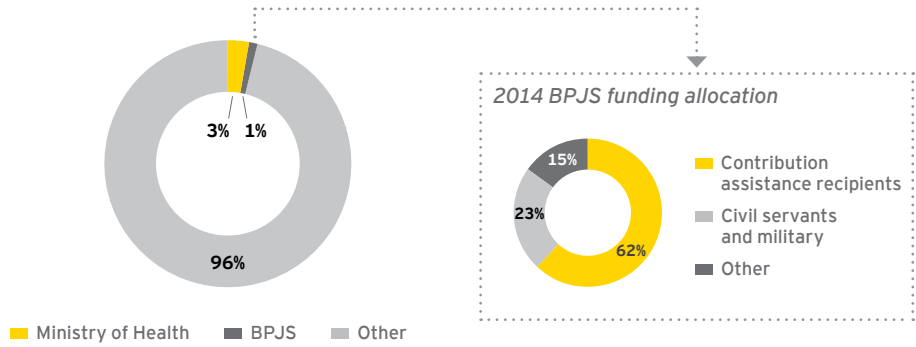
UHC is funded by participants through premiums (see Appendix E) and by the Indonesian Government (mainly for contribution assistance recipients, civil servants and the military).

Government funds come from the federal budget. In 2014, only IDR26 trillion or 1.4% of Indonesia's total federal budget of IDR1,843 trillion (US\$143 billion) was allocated to BPJS Health, to pay premiums for the 86 million contribution assistance recipients (who account for 62% of BPJS Health's budget), along with civil servants and military (who account for 23%), and others. See Chart 11 for details.

However, the federal budget for BPJS Health proved to be too optimistic for 2014, due to a higher than budgeted claim ratio of 103.8% which required additional funding. See Chart 12 for premiums received and claims paid for 2014 (actual) and 2015 (forecast).

Federal budget of Indonesia (2014)

Chart 11

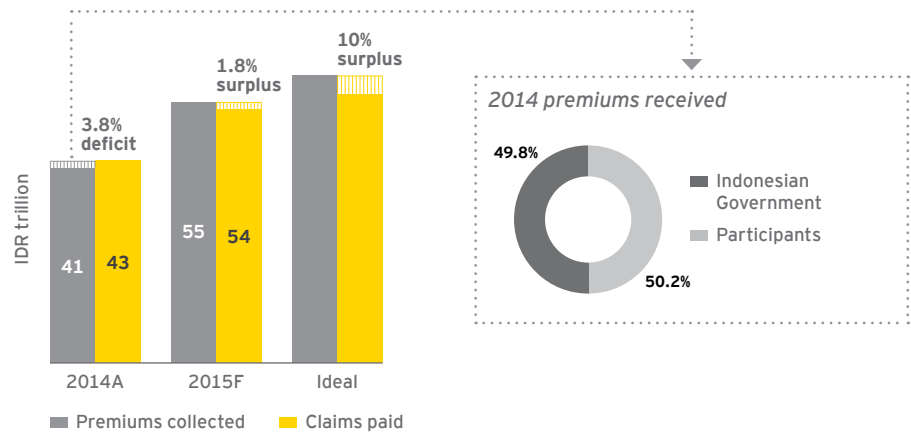


Source: Federal budget (APBN 2014) and Kompas

BPJS premiums received and paid (2014-2015F, in IDR trillion)

Chart 12

BPJS premiums received and claims paid



Source: Kompas and Tempo; F – Forecast



The higher than anticipated claim ratio for 2014 was mainly a result of:

- ▶ **Less than anticipated cross subsidization.** It was assumed that services for the poor or near-poor would be offset by more affluent members who are more likely to use private facilities. This has not (yet) occurred.
- ▶ **Adverse selection effect.** High-risk participants joined the UHC program and sought immediate (high cost) medical treatment. "Out of 140 million BPJS members, 9 million were already sick and sought for treatment. No wonder that the BPJS cost budget was exceeded in 2014," says Romeo Lledo from Siloam. BPJS Health has partly closed this gap by recently implementing a seven-day waiting period between first registration and the start of coverage.

The Indonesian Government and BPJS Health aim to reduce the claim ratio closer to 90% and estimate that the claim ratio for 2015 will drop to 98.25% – mainly through higher participation, as they do not anticipate that premiums will rise until 2016. Meanwhile, claims paid are also expected to rise, but at a lower rate than premiums (premium levels are

currently low, despite many contribution assistance recipients seeking expensive treatment, resulting in higher claims).

In September 2014, the Indonesian Government announced an allocation of IDR20 trillion (US\$1.6 billion) for BPJS Health, to be taken from its 2015 federal budget. In February 2015, the Ministry of Finance announced that a contribution of IDR3.5 trillion (US\$264 million) would be made to BPJS Health to cover deficits arising from the first year of operation. The Ministry of Finance also announced that a reserve of IDR1.5 trillion (US\$120 million) would be made to cover potential deficits if the contribution proved to be insufficient.

In March 2015, BPJS Health announced that premiums for contribution assistance recipients will increase in early 2016. Ifran Humaidi, Head of Public Relations at BPJS Health, stated that "in accordance with Presidential Regulation No. 111/2013 regarding public/social insurance, premiums are to be adjusted or reviewed at least once every two years."

In response to claims that the deficit experienced by UHC may lead to bankruptcy of BPJS Health, Fahmi Idris, CEO of BPJS Health, said in a *Tempo*

interview from March 2015 that "BPJS Health is financially sustainable as it is regulated by federal laws. If it becomes unsustainable, then there are three methods of intervention: firstly, the Indonesian Government can inject further funds; secondly, premiums can be adjusted as necessary; or thirdly, benefits/services can be adjusted as necessary." Though Fahmi Idris also expressed his view that the third option is unrealistic as benefits to society should not be reduced.

In April 2015, according to the *Jakarta Post*, the House of Representatives initiated an audit of BPJS Health's performance, to be conducted by Commission IX, which monitors health and welfare. This audit was tasked with assessing whether it would allow premiums to be raised, as BPJS Health had requested. However, according to the newspaper, the audit working committee was aiming to tackle possible registration irregularities as a first step in order to save money without raising premiums. Dede Yusuf, Head of Commission IX, told the *Jakarta Post* that he hoped such an audit could help BPJS Health save "up to 10%," as a result of helping prevent "wasteful spending" by providers and patients.

Case study: building on Thailand's experience in implementing UHC

In 2002, Thailand introduced UHC, covering 75% of the previously uninsured population. The implementation of this social insurance policy, financed by a general tax through the annual budget bill, has been successful. Evidence points to favorable outcomes such as equitable access to health services, a low level of unmet health needs and a high level of financial risk protection. Between 1990 and 2000, before implementing UHC, Thailand had only reduced its maternal mortality rate by 0.5%. From 2000 to 2013, it reduced the rate by 3.3%, according to WHO data.¹¹

Thailand's case demonstrates that, through Government intervention in providing UHC, overall access to public health can be improved – as illustrated by the declining trend in households suffering from medical impoverishment (Chart 13).

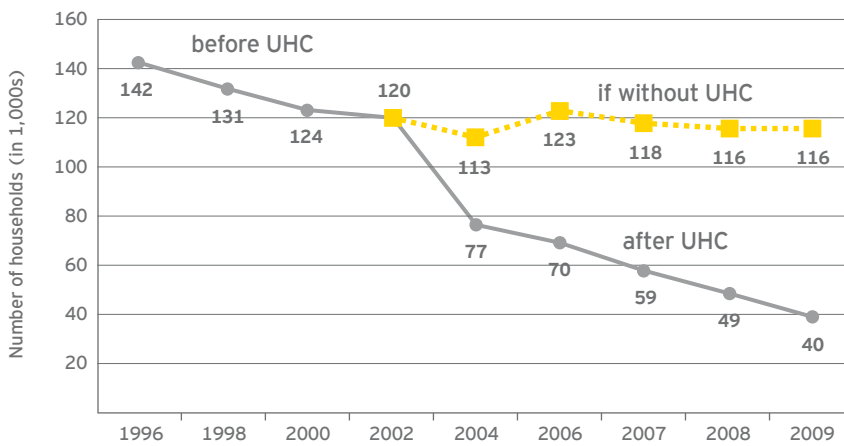
Out of pocket (OOP) expenses for Thailand have decreased considerably from 2000 to 2012, from 34% to 13% of total health care expenditure, demonstrating high capitation rates associated with the introduction of UHC in 2002. The Philippines, meanwhile, still records high OOP expenses; these rose from 41% to 52%, due to its ceiling on benefits, which results in unequal access to health services. In 2012, Indonesian OOP expenses were quite high at 45%: we expect them to fall considerably, as the benefits covered under the UHC scheme are quite comprehensive (Chart 14).

See Appendix F for details of benefits under UHC in Indonesia, Thailand and the Philippines.

¹¹ 'Thailand Maternal Mortality Rate 1990-2013' – WHO, 2014

Thai households suffering from medical impoverishment (1996-2009)

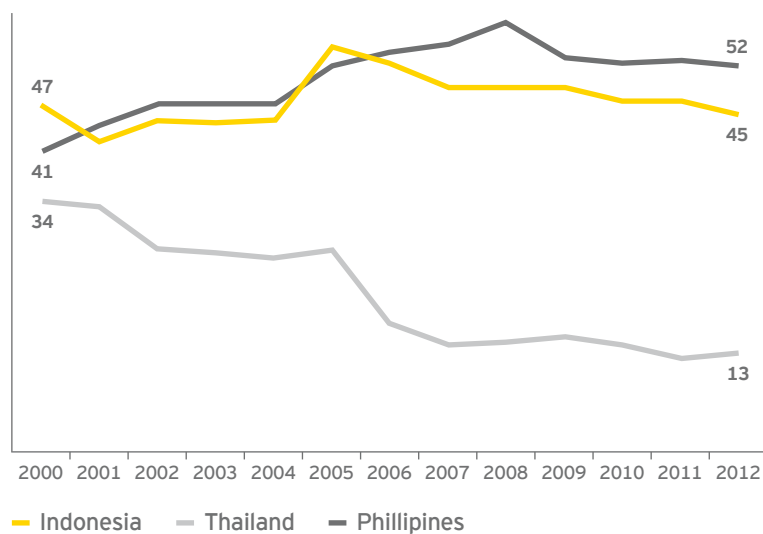
Chart 13



Source: PLOS Medicine

Out of pocket expenses (% of total health care expenditure, 2000-2012)

Chart 14



Source: World Bank



V. Bridging the gaps: challenges and private support

Investors can bring fresh perspectives and expertise to overcome barriers to growth.

**Lack of
qualified
physicians and
nurses**

**Shortage
of hospitals**

**Mitigation
of shortage**

**AEC 2015:
help from
outside?**

**Foreign
ownership**



V.I The gaps

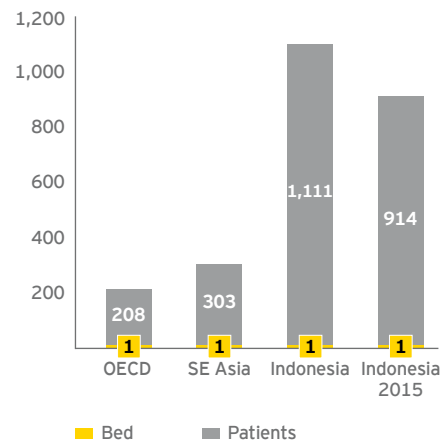
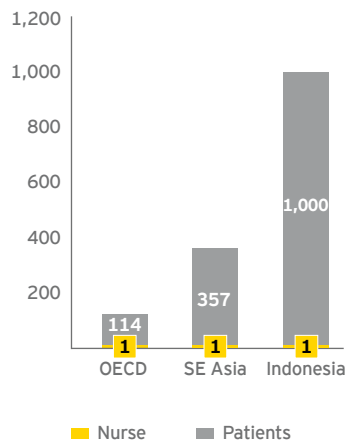
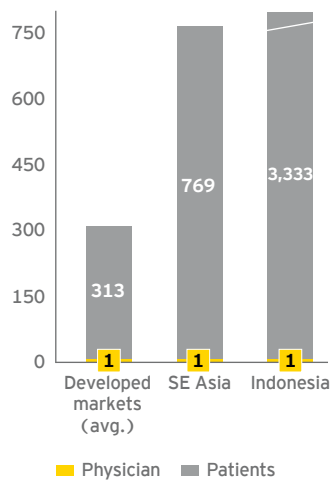
Indonesia's health care system is currently unable to serve its more than 250 million citizens and residents adequately, as the following facts suggest (see also Chart 15). There are:

- ▶ 3,333 people for each physician
- ▶ 1,000 people for each nurse
- ▶ More than 900 people for each bed

Public health care infrastructure is severely underfunded, public hospitals are overcrowded with long waiting times and the quality of service is low. Romeo Lledo from Siloam confirms: "When you go to a public hospital, the crowd is like at a local traditional market."

Comparison of health care infrastructure and resources in 2012

Chart 15



Source: OECD



Ratio of hospitals and beds-to-population, by region (April 2015)

Table 3

Region	Population served per	
	Hospital	Bed
Java and Bali	122,231	934
Sumatra	98,566	906
Kalimantan	107,746	874
Sulawesi	96,391	757
Maluku	62,222	741
Nusa Tenggara	154,687	1,384
Papua	78,431	761
Indonesia average	112,054	914

Source: Ministry of Health

In recent years, the number of people served by each hospital bed has risen. In 2012, one bed served more than 1,000 people; with huge support from the 45% CAGR increase in the number of private hospitals from 2011 to 2013, each bed now serves 914 people (see also Table 3). Nonetheless, this 10% CAGR improvement in bed-to-population ratio is still far below the Southeast Asian average.

Compared with other ASEAN countries and developed markets, Indonesia is facing a massive undersupply of specialists, general physicians, nurses and beds. Quantity is not the only issue: the lack of qualified staff is equally critical.



V.II A lack of qualified physicians and nurses is the major challenge

Hospital players widely admit that their No.1 issue is finding and retaining qualified medical personnel.

“For us it is particularly difficult to find qualified nurses,” says Romeo Lledo from Siloam. “Attracting qualified doctors is less of an issue, due to our strong brand and our state-of-the-art equipment, which makes it very appealing to work with us.”

Other hospital operators report different experiences. “Only 600 specialist physicians graduate per year,” explains Joyce Handajani from Mitra Keluarga. “Graduating as a specialist is rather costly compared to other subjects and requires connections to the doctors’ community. Instead of working at hospitals, a lot of fresh graduates decide to work with pharma and insurance companies due to better pay or work for the government in research functions.”

“The shortage of doctors is challenging, particularly when it comes to the development of new hospitals in second-tier cities,” Joyce Handajani adds.

The uneven geographical distribution of medical professionals is a challenge, as in other countries, as doctors can be reluctant to practice in rural areas. For example, nearly 50% of total health care professionals in Indonesia practice in Java and Bali (2014).¹²

“The Indonesian Government should focus on increasing the number of graduate doctors and its distribution across the nation.”

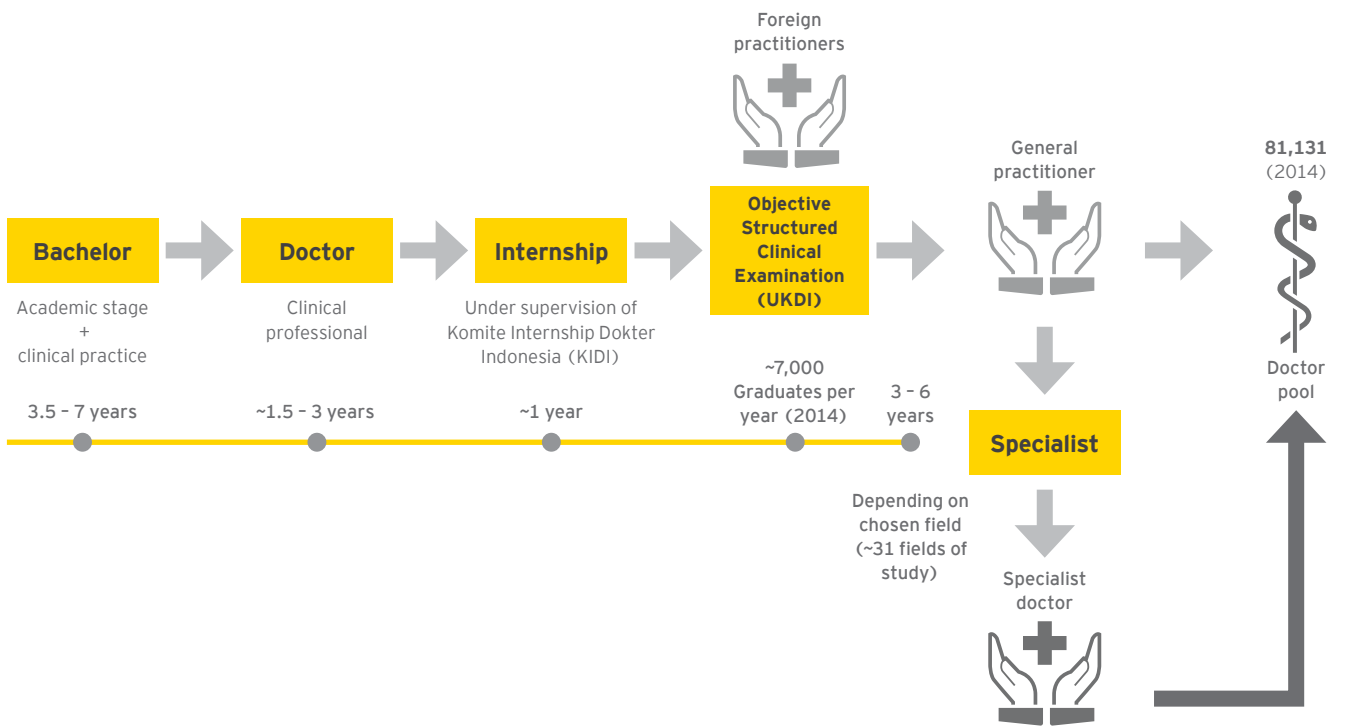
Joyce Handajani, Mitra Keluarga

¹² Indonesian Ministry of Health, 2014



Physician supply chain

Chart 16



Source: WHO, Ministry of Health, EY analysis



V.III Indonesia faces a shortage of hospitals, with rural areas severely underserved

Indonesia currently has about 1,562 public and 666 private hospitals (2013). Most of the hospitals are located in Java and Bali (1,219), Sumatera (511), Sulawesi (182) and Kalimantan (142); together, these hospitals will serve 93% of the projected 255 million population in 2015 (see Appendix G).

While Indonesia's ratio of hospital beds to population is the lowest in ASEAN and among the lowest in the world, the average bed occupancy rate (BOR) of 64% in 2015 was significantly below the Indonesian Ministry of Health's ideal ratio of between 80% and 85%. BOR is used as a measure of quality and is an

operational target; a ratio exceeding the ideal percentage indicates poor hospital safety and efficiency. A higher BOR also reduces the speed of admitting patients with higher care needs and increases the risk of cross-infection in overcrowded wards, as patients are less likely to be assigned toward divisions dedicated to their specific diseases.

The BORs presented in Chart 17 are indicative, as we have not been able to verify the accuracy of numbers published by the Ministry of Health. Possible explanations for BORs exceeding 100% could be patients not having used formal hospital beds (e.g., occupying spare beds), the timing of incoming and released in-patients or "double counting," as patients are moved between hospital wards. Despite uncertainties as to the accuracy of BORs, the message is clear: highly populated regions such as Java and Bali have BORs

above the ideal rate, which indicates a need for additional beds. Our understanding of regions with lower BORs suggests that:

- ▶ People from less developed regions are accustomed to traditional and affordable medication or self-medication.
- ▶ The severe shortage of available quality health care facilities in rural areas forces the population in second-tier cities to either seek medical help from outside the region (therefore high BORs in urban areas) or, if they cannot afford that, to seek traditional medication
- ▶ Around 67% of childbirths in rural areas take place at home, compared to 33% in urban areas, according to a 2011 WHO estimate.¹³

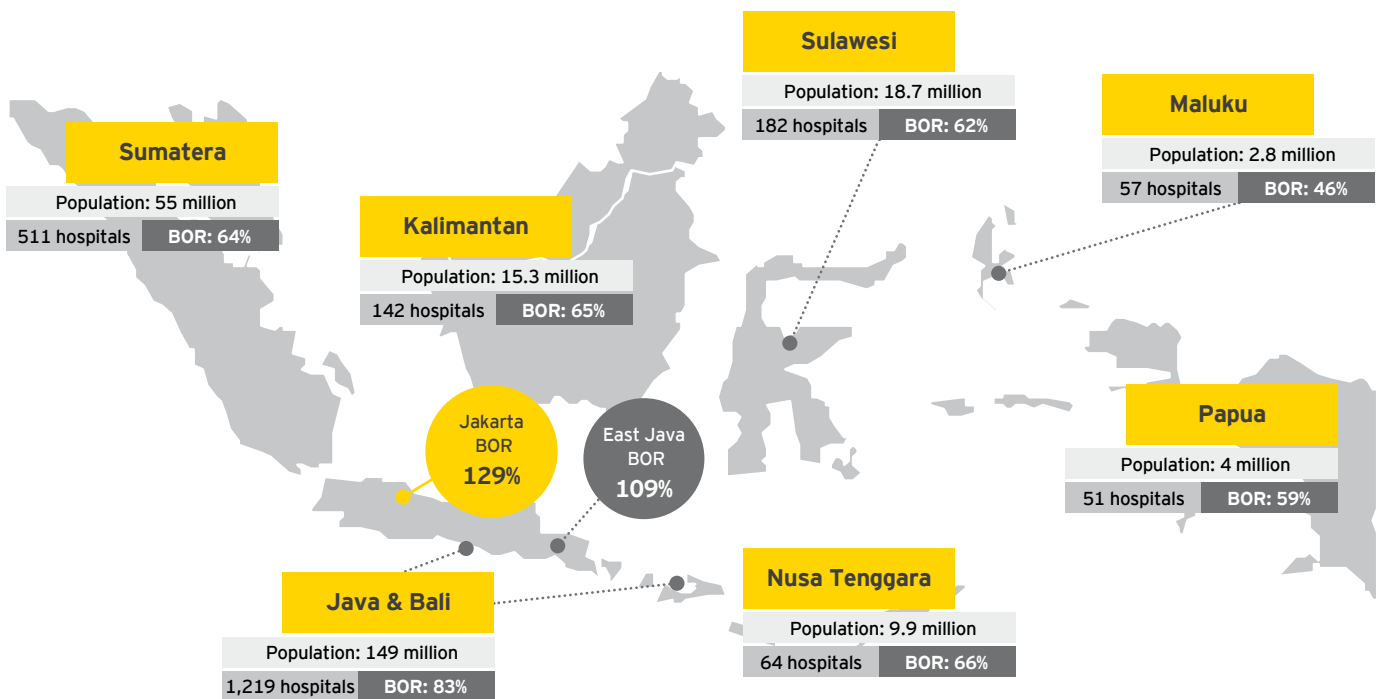
13 'WHO Country Cooperation Strategy – Indonesia' – WHO, 2007-2011

“There are certainly still opportunities in those (first-tier) cities, but I see that local hospitals I spoke to are eyeing second-tier cities such as Palembang and Batam.”

Sahala Situmorang, EY Indonesia

Regional health care infrastructure

Chart 17



Source: Ministry of Health and State Ministry of National Development Planning (Bappenas)

V.IV How private hospitals are helping to mitigate the shortage

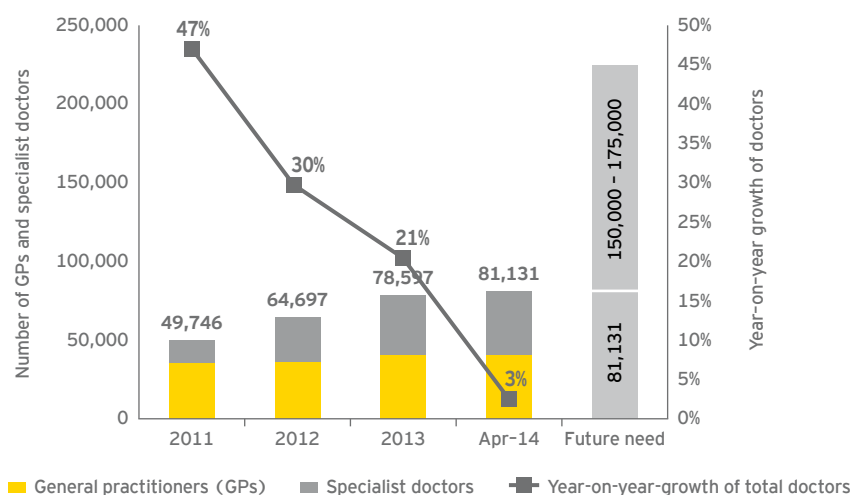
“Between 60 and 70 doctors and a few hundred nurses are required to open a new hospital with more than 200 beds,” notes Romeo Lledo from Siloam. “Most of our GPs are full-time employees while specialists are part-timers, as they are allowed [under Indonesian law] to work for up to three hospitals,” he adds.

The shortage of 500,000 hospital beds translates into a need for between 150,000 and 175,000 additional doctors in the next few years (see Chart 18).¹⁴ Siloam intends to help reduce this shortage by planning to have 40 fully equipped hospitals by 2017.

Even if Indonesia remains significantly behind its ASEAN peers on the bed-to-population ratio, a significant number of additional doctors are required to support the expansion of the hospital industry. For the entire Indonesian health care market, more than 210,000 doctors would be required to meet the Southeast Asian average of doctor-to-population ratio (basis: 2012).

Trend of general practitioners (GPs) and specialist doctors in Indonesia (2010 - April 2014)

Chart 18



Source: Ministry of Health (see Appendix H); Future need: EY rough estimate

Chart 18 illustrates how the growth in new GPs and specialist doctors has slowed down over the past three years to 2013, from 47% to 21%, which has made it challenging for hospitals and other health care providers to support their expansion plans.

Private hospital operators are helping to develop the health care infrastructure and upgrade the skills of physicians and nurses by collaborating with faculties of medicine and schools of nursing, as well as by opening their own training centers. However, these initiatives remain a drop in the ocean.

¹⁴ The shortage of 500,000 beds is a rough estimate of selected market players we spoke to. If taking the bed-to-population ratio of Indonesia into account (2015) and compare it to the average of South East Asia (2012), this would translate into a shortage of circa 840,000 beds.



Tips to attract and retain physicians

Joyce Handajani, Chief Financial Officer at Mitra Keluarga, offers advice on how hospitals can attract and retain talented physicians – particularly specialists:

- 1. Cooperate with universities and take on doctors before they graduate.** Cooperating with reputable medical schools to arrange an early uptake of doctors before graduation, which helps to reach the pool of new doctors.
- 2. Provide access to high-quality medical equipment and training.** Small hospital operators may not have the resources to do this – but doctors are attracted by state-of-the-art equipment and regular training.
- 3. Provide flexibility and support for specialists to continue working in other (overseas) practices, research centers or universities.** Hospitals should be flexible and support specialists to continue working in other (overseas) practices, research centers or universities. Apart from retention considerations, flexibility may help to upgrade the quality of specialists.

Joyce Handajani, Mitra Keluarga



V.V AEC 2015: help from outside?

At the end of 2015, ASEAN is due to launch the ASEAN Economic Community (AEC), which will push the region toward further economic integration, including a freer movement of skilled labor. Doctors are among the eight professions that will enjoy freer movement, which could mitigate the shortage of qualified physicians in Indonesia.

The AEC has developed Mutual Recognition Arrangements (MRAs) and the ASEAN Qualification Reference Framework (AQRF) to support the freer movement of skilled labor. MRAs regulate the recognition and registration of certified professionals who practice in other ASEAN countries. The AQRF enables comparisons of qualifications for skilled labor across ASEAN member states.

However, existing licensing requirements and recent moves to increase protection of the Indonesian labor market through the introduction of new non-tariff barriers (e.g., language tests for foreign doctors) have made it difficult for non-Indonesian doctors to practice in the country.

V.VI Indonesia's health care sector is "mostly open" for majority foreign ownership

Indonesia's health care sector is relatively open for foreign investment – see Table 4 for details.

The Indonesian Government revised the foreign investment regulation in 2014 to encourage foreign direct investment (FDI) from other ASEAN member countries in health care, in line with its commitment to the AEC. Overall, the legal framework to support foreign investment in health care, especially for ASEAN investors, has been adjusted favorably.

A supportive legal framework on foreign ownership is expected to further drive growth of FDI into the health care sector. The World Bank's Southeast Asia Economic Update from April 2014 indirectly confirms this as it sees a strong correlation between fewer foreign ownership restrictions and greater FDI.

“Other than maternity hospitals, foreign investors can hold up to 67% of shares in specialist hospitals.”

Thomas Wirtz, EY Indonesia

Health care investment regulations: the negative investment list (2013 and 2014)

Table 4

No.	Business fields	Investment open for	Year		Location allowed
			2013	2014	
1.	Business/hospital management service	Foreigners	Max. 67%	Max. 67%	Anywhere
2.	General medical services/ public hospital or clinic	Foreigners	×	×	×
3.	Specialist hospital (excl. maternity)	Foreigners	Max. 67%	Max. 67%	Anywhere
		ASEAN investors	Max. 67%	Max. 70%	East Indonesia (excl. Makassar and Manado)
4.	Specialist maternity hospital	Foreigners	×	×	×
5.	Specialist clinic	Foreigners	Max. 67%	Max. 67%	Anywhere
		ASEAN investors	Max. 67%	Max. 70%	East Indonesia (excl. Makassar and Manado)
6.	Laboratory clinic and medical check-up clinic (supporting health)	Foreigners	Max. 67%	Max. 67%	Anywhere

Source: Negative investment list – Presidential Regulation No. 39/2014



VI. Hospital operators in Indonesia

View from the ground floor level: what it looks like to be a participant in the sector.

**The big
picture**

**Performance
of selected
hospital
players**

**Perspectives
of a
transaction
advisor**

**Experiences
of a supplier
of medical
equipment**

VI.I The big picture

Indonesian public hospitals dominate the hospital industry, in terms of total numbers. The private sector has largely contributed to addressing the growing need for health care infrastructure – as shown by the expansion in private hospital numbers at a CAGR of 45% between 2011 and 2013. This compares with the expansion of public hospitals at a CAGR of 5% in the same period (Chart 19) and by the fact that the number of private hospital beds has grown at a CAGR of 49% compared with 24% for public hospital beds (Chart 20).

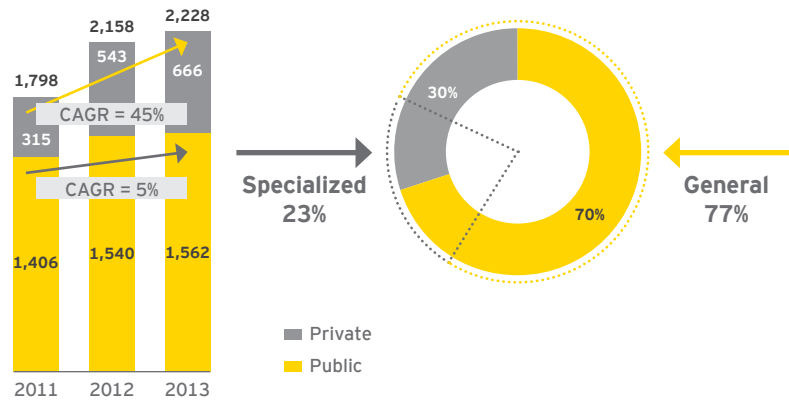
In Indonesia, hospitals that are owned by the Indonesian Government, regional governments and any nonprofit legal entity fall into the public hospital category. Anything profit-based is considered as a private hospital. Hospitals are further grouped into general hospitals and specialized hospitals.

As discussed above, the majority of hospitals in Indonesia are classified as public (70%), with the remaining being private hospitals (30%).

Around 67% of private hospitals offer general services while 33% of private hospitals provide specialized services. This contrasts with public hospitals which are only 18% specialized (see Appendix I). Indonesia has an insufficient number of qualified specialists, which has

Number of hospitals in Indonesia (2011-2013)

Chart 19



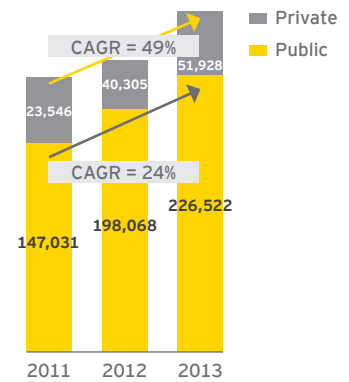
Source: Ministry of Health

contributed to the relatively low number of specialized hospitals and has driven “medical tourism” for those who can afford it.

In theory, an increasing number of private hospitals will be beneficial for public patients as Ministry of Health Regulation No. 56/2014 requires private hospitals to reserve at least 20% of their beds for public patients (Class III). However, even though the Ministry of Health monitors compliance with this requirement, in practice we understand that often the quota is not met, as poor to near-poor patients are often not aware of their rights or not confident enough to visit private hospitals.

Number of hospital beds in Indonesia (2011-2013)

Chart 20



Source: Ministry of Health

Medical Offices

4

VI.II Selected private hospital players

Of the 666 hospitals accepting private patients, 599 are owned by the private sector. Major publicly listed players in the private hospital industry include Siloam, Mayapada, Mitra Keluarga and Omni, representing 6,354 hospital beds or 12.2% of the total 51,928 private

hospital beds in Indonesia and 5% of total private hospitals (see Appendices I and J). Table 5 sets out a selection of statistics of publicly listed private hospital players in Indonesia. There are 73 major private hospitals in Indonesia operated by the top 10 private players. Of these, 57% of the hospitals are located in the Greater Jakarta area (42 hospitals) as mentioned in a press release from Frost & Sullivan in April 2015.

Apart from Mitra Keluarga and Mayapada, the top hospital players in Indonesia accept BPJS patients, as shown in Table 5.

With the exception of Mayapada, EBITDA margin of the publicly-listed private hospitals was positive and up to 33% (EBITDA to gross revenue margin).

Selected statistics of publicly listed private hospitals (2014)

Table 5

Company	# of existing hospitals	Hospitals in development	# beds	Accepts BPJS	EBITDA margin*	Market capitalization (US\$m)	Enterprise value (US\$m)	EV/bed (US\$m)
Siloam	20	30	3,900	Yes	19%	1,190	1,285	0.268
Mitra Keluarga	11	7	1,647	No**	33%	2,674	2,544	1.545
Mayapada	2	5	407	Not yet	-6%	134	229	0.562
Omni	2	2	400	Yes	30%	276	285	0.712

Source: Company websites, Capital IQ, BPJS website, EBITDA margin of Siloam: management information

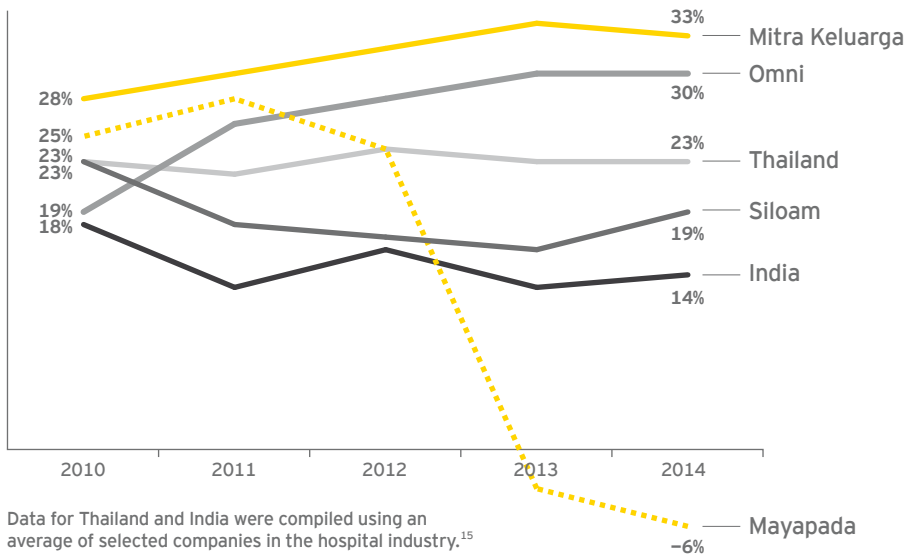
* EBITDA margin of Siloam, Mitra Keluarga and Omni is based on EBITDA to net revenue (after deduction of doctors' fees). EBITDA margin of Mayapada is based on EBITDA to gross revenue (before deduction of doctors' fees).

** Joyce Handajani confirmed this to us during an interview on May 11, 2015.



EBITDA margin trends of selected hospital players in Indonesia compared to Thailand and India* (2010-2014)

Chart 21



Data for Thailand and India were compiled using an average of selected companies in the hospital industry.¹⁵

*EBITDA margin of Siloam, Mitra Keluarga and Omni is based on EBITDA to net revenue (after deduction of doctors' fees). EBITDA margin of Mayapada, Thailand and India is based on EBITDA to gross revenue (before deduction of doctors' fees).

Source: Company websites, Mitra Keluarga prospectus, Capital IQ, EBITDA margin of Siloam: management information

After years with strong EBITDA margin, Mayapada reported negative EBITDA margin in 2013 and 2014, mainly due to increased costs which offset the growth in revenue (see Chart 21).

Sahala Situmorang explains this in the interview in the following section.

¹⁵ **Thailand:** Aikchol, Bangkok Chain, Bangkok Dusit, Bumrungrad, Chiang Mai Ram, Nonthavej, Ramkhamhaeng, Samitivej, Srivichai, Thai Nakarin, Vibhavadi.
India: Dr. Agarwal, Fortis Malar, Indraprastha, KMC, Lotus, Regency Hospital.

“A private equity house I recently advised was very surprised to see that the margin of an Indonesian hospital they looked at was almost 50% higher than a similar hospital in India.”

Sahala Situmorang, EY Indonesia

VI.III Perspectives of a transaction advisor

In the following interview, Sahala Situmorang, Partner and M&A Leader of EY Indonesia, discusses the importance of a clear strategy before entering the Indonesian hospital market.

Has the introduction of UHC changed the strategies of hospitals?

The answer is clearly YES. If a government starts to spend over US\$3 billion on health care (as the Indonesian Government did), businesses want to benefit from this spending. Hospitals have started to maximize their utilization through better roster management. Additionally, most of my hospital clients are planning to add about 20% to 30% bed capacity within the next one to two years. Scale is important because it helps hospitals to attract doctors (through higher doctor income) and lifts up profitability, as most costs of a hospital are fixed in nature.

Why is the health care sector in Indonesia so attractive for investors?

I do not see much difference between the lifecycle of the health care and other industries. The health care sector in Indonesia is at an early stage of its life cycle, with a significant imbalance between demand and supply. India, a country with a large population and similar health patterns compared to Indonesia, is a few years ahead of Indonesia when it comes to health care, and we are seeing large hospitals with between 1,000 and 2,000 beds per hospital. While India's health care sector is already experiencing slowing growth and profitability, the sector in Indonesia has just begun to grow rapidly, particularly after the introduction of UHC. A private equity house I recently advised was very surprised to see that the margin of an Indonesian hospital they looked at was almost 50% higher than a similar hospital in India.

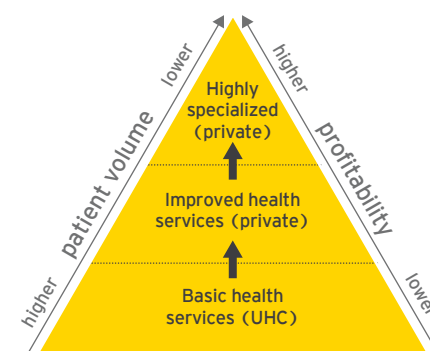
Where do you see opportunities from UHC for hospitals?

All hospitals will eventually benefit from UHC. These opportunities are best illustrated by a pyramid (see Chart 22). UHC targets the lower end of the

pyramid, which is a high volume, low margin business. Patients have to queue for a long time for BPJS services, and once they become more affluent, they often move to an improved health service level that will be also crowded if more affluent patients use the services and so forth. Hospital players who capture all levels are best placed to benefit most from UHC – therefore it makes sense for investors to build tandem hospitals, serving both BPJS and private patients. Large players such as Siloam have the same view on this.

Pyramid of health services and profitability

Chart 22



Source: EY illustration



Do you see other opportunities for hospitals serving BPJS patients?

Yes, with higher volumes of BPJS patients, hospitals need to be prepared not just for more patients but also for their accompanying relatives. In Indonesia, due to strong family ties, patients are typically accompanied at least by one or two relatives. If I take the example of one of my hospital clients with about 1,000 patients coming in and out per day, this would translate into at least 3,000 guests per day. These guests need services, and hospital operators have responded to this by renting out space for restaurant and shopping facilities or even developing nearby hotels.

Where do you see opportunities for hospitals to expand geographically?

Patients already have reasonable access to hospitals in first-tier cities. There are certainly still opportunities in those cities, but I see from the local hospitals

that I spoke to that they are eying second-tier cities as more promising investment opportunities. RS Awal Bros, a large private hospital group in Indonesia, also uses this strategy for expansion. There are two main reasons for this: first, bed occupancy is still low and offers potential for growth. Second, due to lower property prices, costs are lower and hence profitability is typically higher in second-tier cities.

What are the main challenges for hospital operators?

Recruiting and retaining good doctors are the main challenges for hospitals. Additionally, qualified nurses are difficult to find and keep. Hospitals should closely work with universities and vocational schools (for nurses) to attract students at an early stage. Grooming doctors by giving them access to quality medical equipment helps with retention. After all, good doctors like to provide quality diagnosis and treatment, and they want to be equipped for that.

What should a foreign investor consider?

Doing business in Indonesia, and this includes the health care sector, requires local knowledge and connectivity. Therefore, it is advisable for a foreign investor to partner with a local player. When selecting a local partner, investors should have a clear road map and think about how they can add value. My discussions with local hospital operators show that capital is not a major concern. Why? Particularly after the introduction of UHC, the Indonesian banking sector sees health care as an attractive industry. A CFO of a public hospital I recently talked to told me that before joining the hospital, he was CFO of a mining company. He noticed that while the mining sector was favored by banks five years ago, health care is the “new darling” and bankers are “queuing up” to provide funding.



VI.IV Experiences of a supplier of medical equipment

Siemens Indonesia (Siemens) is a major supplier of high-end medical equipment in Indonesia and has been in the country for more than 15 years. Siemens' product lines include imaging (CTs, MRIs, etc.), clinical products (mobile x-rays, ultrasound, etc.) and diagnostics (laboratories). "Siemens in Indonesia serve imaging and clinical products to the high-end segment of the market for medical equipment," says Dr. Stefanus Widananta, Health care Country Lead for Siemens.

Given the enormous potential from the expansion of BPJS hospitals, the company is considering to serve mid- to low-end product segments in the near future. "We are thinking to offer M3 and M4 product segments (mid- to low-end medical equipment) in Indonesia. As a

result, we also need to widen our distribution coverage, for example to regions such as Sulawesi with high potential and increase the headcount of our sales and after-sales teams," Dr. Widananta says.

The introduction of the so called e-catalogue has changed the sales process to public hospitals. "The e-catalogue is really good because prices for medical equipment procured by the Indonesian Government are negotiated and agreed once and are binding across Indonesia," Dr. Widananta says. Siemens has a direct sales force for its private hospital customers.

The key obstacle for Siemens' customers is to obtain funding for medical equipment, which can cost up to US\$1 million per unit. Additionally, it is not easy to sell foreclosed medical equipment and if, then the pricing might be low given that the market for used equipment is very small.

VII. What EY can do to help you achieve your goals

We operate as the most globally integrated organization, with one methodology across all our geographical areas. This is a structure that enables us to mobilize our local and international people quickly and allocate them to projects in the right place, at the right time.

We help companies create strategies for long-term growth, in the following ways:

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Market entry strategy

We analyze health care market opportunities, develop a penetration strategy and consider related investment risks with respect to entering the Indonesian health care market through various types of transaction.

Business performance improvement

We work in a range of fields across the health care industry – from improving your business processes and helping you leverage IT for better business value, through to managing change and optimizing your workforce. We can also advise you on your customer strategy and your supply chain and operations, while considering how to manage risk effectively through improved governance, risk and compliance.

Portfolio optimization

Our team evaluates a set of business units or products to determine where decisions should be made with respect to growth, restructuring or potential divestment.

Working capital management

We help you improve cash flows and release value in current capital accounts (receivables, payables, and inventory), thereby improving overall liquidity and offering effective strategies for managing credit lines.

IPO readiness

We help in structuring and preparing a business for public listing, including valuation assessment and IPO planning, guidance on rules and regulatory compliance, advice on timing and assistance in creating relevant documentation.

Lead advisory

We assist in assessing potential synergies within a project, project-managing the steps, assisting with negotiations and financial models and measuring transaction implications

Due diligence

Our dedicated professionals help you to investigate a business' core financial, compliance, taxation status and risks – assuring the strategic fit of your targeted health care company or divestment in terms of supporting sustainable growth.

Valuation and business modeling

We provide deeper analysis of a health care business, by looking at the robustness of financial projections going forward while maintaining reasonableness of key assumptions.

Restructuring

We support you in managing work-out or turnaround processes and in allocating capital and investments – evaluating your business plans objectively.

Tax services

Our tax experts help you with services including, but not limited to, tax due diligence, tax structuring, transfer pricing, human capital (including expatriate services) and tax policy and controversy services.

*Lead advisory
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*Romeo Lledo,
Group President Director at Siloam*

Appendix A

Interview with a private hospital serving private and UHC patients: Siloam

Siloam operates 20 hospitals catering to private and UHC patients and recorded gross revenues of US\$270m in 2014, making it the largest hospital operator in Indonesia.

Romeo Lledo, Group President Director at Siloam, shares his views on the opportunities and challenges of the Indonesian health care sector.

How does the implementation of UHC affect health care in Indonesia?

Indonesia is an underserved health care market with low bed and doctor ratios to the population. The implementation of UHC is already driving demand and will, at least in the short term, worsen the existing supply shortage.

Siloam Hospitals Group is supportive of UHC, since it aligns with our vision to cater to all Indonesians regardless of their income. At the moment our target is for 18 out of our total 20 hospitals to cater to UHC patients, however, these contribute only 6% to 8% to our group's total revenue and it is expected to reach 10% to 12% going forward.

UHC rates are very low and often do not cover cost, particularly for complicated cases. Therefore, to run a successful UHC business, the key is case management and proper allocations of working capital. Reimbursing costs from BPJS can be sometimes lengthy due to the complicated process, but the Indonesian Government has significantly improved the payment process recently.

Did the introduction of UHC make you change your business strategy?

UHC did not change our overall business strategy. In fact, our vision has always been to provide accessible and affordable world-class health care to all Indonesians. Four years ago, well before the introduction of UHC, we already opened a low-cost general hospital in Karawaci (Tangerang) catering to near-poor and poor patients, both public and private. Since the introduction of UHC, we have developed a business model for our UHC business that, at the economy of scale of 300 beds, generates EBITDA to gross operating revenue (reimbursement price of BPJS) margin of 15%.

What did you do differently after the introduction of UHC?

As mentioned earlier, the key factor is cost management involving the proper allocation of equipment utilization and doctor participation on the program that is unique to Siloam and is important to achieve our profitability targets.

We are also focusing on managing our direct costs, of which 90% relate to consumables and drugs. We have

reduced the number of items from over 8,000 to 2,500 to benefit from higher volume discounts from suppliers but also to improve our working capital requirements.

The operating expenses of medical equipment are sunk costs, either used or not. Therefore, we maximize the utilization of equipment for UHC patients, at the reimbursement price of BPJS.

The procurement of medical equipment is centralized at our group, and we work with only a few suppliers to achieve better prices through higher volumes. For instance, we have purchase agreements with Philips and GE Health care for medical diagnostic equipment such as MRI, CTs and x-ray machines and with Mindray for operating theatre equipment.

What are your future development plans?

Based on our study of 134 Indonesian cities, we have identified 79 cities for our expansion plan with 46 hospital projects in the pipeline. Our aim is to build 40 hospitals outside of metropolitan Jakarta

and five additional hospitals in Jakarta by the end of 2017. We think that these additions will still be far from sufficient to meet the demand for hospital beds. One of our initiatives for 2015 is to introduce Siloam Express; these are mini emergency hospitals with approximately 40 beds and the capability to stabilize patients in trauma cases, located at Lippo Malls (associated with Siloam).

Do you think the development costs for a hospital in remote areas are lower than in Jakarta?

No, I don't think so. Land acquisition costs in remote areas might be lower than in Jakarta but are often offset by higher costs to construct the hospital building, which requires specific know-how that is mostly not available outside of Jakarta.

What are the main challenges Siloam faces in mitigating the shortage in supply?

The development of a new hospital takes approximately three years in Indonesia, due to a lengthy process, which requires approximately 36 different licenses from various national, regional and city authorities.

In addition, the quality of nurses and other human resources, such as technicians and lab workers, is a challenge, as there is a national shortage.

How do you deal with a severe shortage of specialists in remote areas or smaller cities?

What we are trying to do is to balance the scarcity of specialists in smaller cities by introducing telemedicine through our

“hub and spoke” strategy. During emergencies, patients in smaller cities can have access to specialist doctors from our hospital “hubs” in Jakarta with centers of excellence. This shows that IT infrastructure is becoming more important to ensure that all patients can expect the same high standards at all of our hospitals and at the same time managing costs for costly specialists.

What else do you think are the benefits of modern IT infrastructure?

Modern IT infrastructure helps to reduce costs but also improves convenience for patients. For example, doctor appointments can be made online.

Do you think the AEC can help to address the shortage in doctors?

In the short to medium term I do not expect that Indonesia will open up for foreign doctors. In the long-term, Indonesia will eventually open medical practice for foreigners in the ASEAN region due to the implementation of the AEC.

How do you recruit and develop talent to support your expansion plans?

Finding strong and experienced hospital managers is not easy. Therefore, Siloam develops its own talent through the so called MA (Management Associates) program, i.e. young GPs undergo an 18-months program in finance operations while high performing colleagues with a finance background spend time at medical operations and being exposed to clinical governance. I think a healthy mix of colleagues with a medical and finance background are ideal to support the expansion of our hospital group.

How do you see the health care sector by 2019, the deadline by which all Indonesians are covered by UHC?

By 2019, as planned by the (Indonesian) Government, all Indonesian will be covered by UHC. I make the following three predictions: **1.** Even after 2019, the business of private hospitals will not change because benefits such as free-choice of doctors, reduced waiting times and one-bed rooms will continue to draw patients to private hospitals. **2.** UHC will increase its network and volume. The Indonesian Government will change its trajectory to mitigate the supply-demand gap and mandate all private hospitals to participate in UHC. President Jokowi (Joko Widodo) has announced these plans about two months ago. **3.** The growth will continue in volume and revenue because the significant supply-demand gap will continue for the next two to three decades.

Do you think UHC is financially sustainable?

Yes. The Indonesian Government is fully committed to the UHC program. Also, the current health care spending of US\$107 per capita is way below its peers in the region, thus there is a lot room for the Indonesian Government to fund from its treasury.



*Joyce Handajani,
Chief Financial Officer at Mitra Keluarga*

Appendix B

Interview of a private hospital serving private patients only: Mitra Keluarga

Mitra Keluarga operates 11 hospitals catering to private patients in Greater Jakarta and Surabaya recorded net revenues (excluding doctors' fees) of US\$157m in 2014, making it one of the largest hospital operators in Indonesia.

Joyce Handajani, Chief Financial Officer at Mitra Keluarga, speaks about her view on opportunities and challenges of the Indonesian health care sector.

Did the introduction of UHC make you change your business strategy?

Our business strategy did not change as a result of the introduction of UHC. We focus on private patients and will continue to do so going forward, unless the regulatory environment changes. Due to the specific demographic situation in one of our hospitals in Java with lower incomes compared to Jakarta, we tried to open a wing of our hospital for BPJS patients there. However, BPJS Health did not support this and required us to open the entire hospital for BPJS patients, which we did not want.

About 18 months later, how has UHC affected your business?

In the first quarter 2015, year-on-year, we have seen a decline in the number of in-patients by 1.75% while the number of out-patient visits increased by 3%. The decline in the number of in-patients was caused by patients who, for example, previously used our maternity services and moved to BPJS Health to save costs and also privately insured patients with expensive treatments such as dialysis which do not underlie ceilings under BPJS Health as compared to private insurance.

Our business was also negatively affected by patients who were no longer covered by private insurance because their employer, mostly smaller companies, reduced health insurance benefits to BPJS Health. I believe that this trend is short lived for two reasons: firstly, patients are currently trying out the benefits of BPJS Health but will probably realize sooner or later the benefits offered by private hospitals, namely higher quality services and shorter waiting times. Secondly, employers will eventually weigh up the benefits of lower costs for health benefits against higher costs from reduced productivity of their employees. An out-patient coming to one of our hospitals spends around 3 hours compared to much longer waiting times, sometimes days, at BPJS facilities.

How do you address the decline in the number of patients?

We are expanding our diagnostics services to compensate for the decline in patient numbers. We believe we are capable to offer our patients with efficient yet quality health services. Our average length of patient stays stood at 3.6 days in 2014, which has been

consistently lower compared to a national average of 4.4 days.

What are your future development plans?

Our expansion is clearly focused on Greater Jakarta and Surabaya because these areas provide a better supply of doctors. In Jakarta 0.88 doctors serve 1,000 patients compared to a ratio of 0.3 in rural areas. On the demand side, the average GDP per capita is higher in Greater Jakarta and Surabaya than in other regions.

What do you think about President Joko Widodo's recent statement that all private hospitals will have to accept BPJS patients in the future; otherwise he would revoke their business licenses?

We acknowledge President Joko Widodo's plans and will of course comply. In fact, by law, private hospitals are already required to accept emergency cases. The mandatory acceptance of BPJS patients by private hospitals will significantly drive costs though, because if health services are offered they are also used. I have heard of a patient with claims of more than US\$1 million.

What is the most critical thing the Indonesian Government can do for your hospital group?

We would like to offer COB to our patients but a regulation on the implementation of COB has yet to be issued and it is unclear when this will happen. It is important that the discussions between BPJS Health and the private insurance industry are moving forward, because it will allow us to participate in UHC. The critical discussion point is that BPJS Health wants to avoid that major financial risks, for example resulting from the costly treatment of cancer patients, will eventually remain with BPJS Health and are not fairly shared with private insurers who typically impose a ceiling on costs while BPJS Health has no ceiling.

What is the key challenge of your business?

The supply of doctors is the biggest challenge for our business.

Do you think the AEC can help to address the shortage of doctors?

I don't think that the AEC can help to address the shortage of doctors, at least not in the medium term. More important is that the Indonesian Government focuses on increasing the number of

doctor graduates. GPs can graduate at private universities but graduation of specialists is limited to state universities. As part of the credentialing process, before a new doctor can practice, he or she will require recommendations from local or regional collegiums of doctors. Not just foreigners but also doctors from other regions are affected by this.

Where do you see your profitability in the next five years as compared to now?

I see the profitability of Mitra Keluarga to remain stable in the next five years, however, this requires a strict focus on cost management. Apart from the costs for doctors, we need to manage the procurement of pharmaceuticals. Between 45% and 50% of our group's total revenues are generated from pharmaceuticals. Therefore, we need to be good at managing the corresponding costs.

How do you think management can make a difference to the profitability of a hospital?

We are in a lucky position that our management has decades of experience in the hospital sector. I think that GPs with hospital management skills and experience are best placed for the

difficult task of managing a hospital. This has also the benefit that they know the hospital operations and are better accepted by their practicing peers at the hospital.

What is your advice to foreign investors entering the hospital sector in Indonesia?

Foreign investors need to understand that things in the Indonesian hospital sector are different from other markets. For example, local pharmaceutical players are very strong here. Therefore, existing procurement agreements with international players might not be useful. Foreign investors should build business cases that reflect local conditions and challenges which require in-depth knowledge of the local conditions.

“I think GPs with hospital management skills and experience are best placed for the difficult task of managing a hospital.”

Joyce Handajani, Mitra Keluarga

Appendix C

Regional population and GDP per capita (2015F)

Region	Population 2015F (in million)	GDP by region 2015F (US\$ billion)	2015F GDP per capita (US\$)
Java and Bali	149.4	571.3	4,711
Sumatra	55.3	189.1	3,607
Kalimantan	15.3	74.2	4,768
Sulawesi	18.7	46.1	2,222
Maluku	2.8	3.0	1,055
Nusa Tenggara	10.0	12.0	1,214
Papua	4.0	13.6	4,289
Total	255.5	909.3	3,559

Source: EIU and Statistics Indonesia (BPS); F – Forecast

Appendix D

Health care expenditure as % of GDP (2008–2013)

	2008	2009	2010	2011	2012	2013
Indonesia	2.81	2.83	2.92	2.86	3.03	3.07
ASEAN	3.78	4.09	3.91	3.87	3.91	4.04
Developed markets	11.61	12.66	12.51	12.39	12.61	12.32

Source: World Bank

Appendix E

UHC premium structure (2014)

Society member	Monthly premium	Health care accommodation level
Contribution assistance recipients (PBI)	IDR 19,225/person paid by the Indonesian Government	Third class
Civil servants, military, police and retirees	2.0% of salary (max. IDR 94,500) paid by employee; 3.0% of salary (max. IDR 141,750) paid by employer	First and second class*
Private business employees and non-civil servant Indonesian Government employees	<ul style="list-style-type: none"> ▶ Until June 2015: 0.5% of salary (max. IDR 23,625) paid by employee; 4.0% of salary paid by employer (max. IDR 189,000) ▶ From July 2015: 1.0% of salary (max IDR 47,250) paid by employee; 4.0% of salary (max. IDR 189,000) paid by employer 	First and second class*
Informal workers and non-employees	<ul style="list-style-type: none"> ▶ IDR 59,500 per person ▶ IDR 42,500 per person ▶ IDR 25,500 per person 	<ul style="list-style-type: none"> ▶ First class ▶ Second class ▶ Third class

* Note: Class depends on the absolute amount of premium paid
Source: BPJS and Indonesian social security website

Appendix F

Benefits covered by UHC in Indonesia, Thailand and the Philippines

	Indonesia	Thailand	Philippines
Medical benefits	<ul style="list-style-type: none"> ▶ Medical examinations, treatment and medical consultations ▶ Vaccines for basic immunization, and basic contraception ▶ Medicine and medical consumables ▶ Non-intensive and intensive care hospitalization ▶ Medical implant services 	<ul style="list-style-type: none"> ▶ Outpatient benefits ▶ Inpatient benefits ▶ Accident and emergency services ▶ Dental and other high cost care ▶ Diagnostics ▶ Special investigations ▶ Medicines (no fewer than the ones included in the national list of essential medicines) ▶ Medical supplies 	<ul style="list-style-type: none"> ▶ Inpatient benefits ▶ Outpatient benefits ▶ Z Benefits (catastrophic illnesses that push patients into prolonged hospitalization and very expensive treatments such as cancer) ▶ Millennium Development Goals-related benefits
Non-medical benefits	<ul style="list-style-type: none"> ▶ Accommodation benefits ▶ Ambulance services ▶ Medical forensic services ▶ Mortuary services at health care facilities ▶ Administrative services 	<ul style="list-style-type: none"> ▶ Ambulatory care ▶ Premarital counselling ▶ Family planning services 	<ul style="list-style-type: none"> ▶ Accommodation benefits ▶ Ambulance services
Exclusions	<ul style="list-style-type: none"> ▶ Cosmetic surgery ▶ Orthodontics ▶ Infertility treatment ▶ Drug rehabilitation programs ▶ Claims relating to extreme hobbies ▶ Services performed overseas 	<ul style="list-style-type: none"> ▶ Infertility treatments ▶ Cosmetic surgery ▶ Some organ transplants 	<ul style="list-style-type: none"> ▶ Fifth and subsequent normal obstetrical deliveries ▶ Drugs and devices which are not prescribed by a doctor ▶ Treatment for alcohol abuse or dependency ▶ Cosmetic surgery ▶ Optometric services ▶ Other cost-ineffective procedures as defined by PhilHealth
Limits/benefit caps	No	Various, depending on the benefit	<ul style="list-style-type: none"> ▶ Annual or lifetime coverage limit on some benefits ▶ Other benefits are capped at a certain amount

Source: BPJS, PhilHealth, WHO

Appendix G

Number of hospitals and beds by region (April 2015)

Region	Hospitals	Beds
Java & Bali	1,219	159,379
Sumatra	558	60,667
Sulawesi	194	24,691
Borneo	142	17,489
Nusa Tenggara	64	7,149
New Guinea	51	5,254
Maluku	45	3,774
Total	2,273	278,403

Source: Ministry of Health

Appendix H

Number of health care professionals by type (2010-2014)

No.	Type	Year				
		2010	2011	2012	2013	2014 (most recent)
1	Specialist doctors	8,403	16,574	27,333	36,756	38,866
2	General practitioners	25,333	33,172	37,364	41,841	42,265
	<i>All doctors (sum 1-2)</i>	<i>33,736</i>	<i>49,746</i>	<i>64,697</i>	<i>78,597</i>	<i>81,131</i>
3	Dentists	8,731	10,575	11,826	11,857	13,092
4	Nurses	169,797	230,280	235,496	288,405	295,508
5	Midwives	96,551	120,924	126,276	137,110	136,606
6	Pharmaceutical workers	18,022	25,439	31,223	40,181	46,336
7	Other health care workers	64,908	99,631	97,904	125,494	125,349
8	Non-core workers	109,307	124,694	139,812	195,454	193,875
Total		501,052	661,289	707,234	877,098	891,897

Source: Ministry of Health

Appendix I

Hospital categorization in Indonesia (2013)

Hospital type	General	Specialized	Total
Public	1,277 (82%)	285 (18%)	1,562
Private	448 (67%)	218 (33%)	666
Total	1,725 (77%)	503 (23%)	2,228

Source: Ministry of Health

Appendix J

Hospital bed trend between public and private operators (2011-2013)

Hospital beds	2011	2012	2013	CAGR
Public	147,031	198,068	226,522	24.1%
Private	23,546	40,305	51,928	48.5%

Source: Ministry of Health

“Investors can add value by bringing in management expertise, which is sorely lacking in this sector. With better management, hospitals can benefit from economies of scale, which could be translated into better compensation for doctors and other medical personnel. The collegium of local doctors also needs to open up to welcome new talent.”

Thomas Wirtz, EY Indonesia

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