Abstract
The lack of health workers in remote and rural areas is a worldwide concern. To solve this problem, the Indonesia Ministry of Health performed a program named Non-Permanent Personnel Appointment for doctors and dentists who serve in health centers throughout Indonesia, except for the islands of Java and Bali. It is aimed to fulfill the need for health workers in disadvantaged areas, borders, and islands as well as in areas that were lacking doctors and dentists. This research was a descriptive study using secondary data from PTT applicants in the Bureau of Personnel in the Ministry of Health from 2010 to 2015, which aimed to identify the doctors’ and dentists’ choices of location (provinces) as areas of assignments. The result showed that at the national level, each year, the number of doctor applicants always exceeded the formation, while the structure of dentists still exceeded the number of applicants, except in 2013. West Sulawesi, Gorontalo, Central Sulawesi, North Sulawesi, Central Kalimantan, and Papua were provinces that were lacking doctor applicants, while Riau, Kepulauan Riau, South Sulawesi, West Sumatra, North Maluku, and Maluku were provinces with sufficient, even abundant number of dentist applicants. Conclusion: the number of doctors who applied for PTT was quite high, but the distribution was uneven (the island of Sumatera had the most senior applicants), while the number of dentists who applied for PTT was still less than the demand.

Keywords: Non-permanent personnel appointment (PTT); doctors PTT; dentists PTT; rural; remote.

1. Introduction
The world will be sort of 12.9 million health-care workers by 2035 (GHWA and WHO 2013). Even if a country has ‘enough’ doctors overall, they may not be distributed across geographical areas especially in rural and remote regions whereas innovative solutions are needed (Scott et al. 2013). Indonesia is no exception, in 2006, WHO reported that
Indonesia was among 57 countries suffering a critical shortage of health workers (WHO 2006).

To solve this problem, Indonesia Ministry of Health performed a program named Non-Permanent Personnel Appointment (PTT) for doctors and dentists who serve in health centers throughout Indonesia, except for the islands of Java and Bali. PTT doctor and dentist were not civil servants, appointed by the authority on health care facility for the short-term duration (Ministry of Health Republic Indonesia 2013). In 2015, the Ministry of Health had elected 1057 doctors and 459 dentists as PTT which conducted in April, June, September, and October 2015 (Personnel Bureau of Ministry of Health 2015). This study aimed to identify the doctors’ and dentists’ choices of location (provinces) as areas of assignments.

2. Methods

This research was a descriptive study using secondary data from PTT applicants in the Bureau of Personnel in the Ministry of Health from 2010 to 2015. The study populations was doctors and dentists who applied for PTT. Data consisted of PTT formation and applicant in every period in 26 provinces excluding Java island, Bali, and North Kalimantan. North Kalimantan excluded because data for North Kalimantan was only available since 2014. This study compared the number of formation given by the Ministry of Health with the number of applicants. The comparison result was a ratio of applicants and structures in each province which trend could be viewed and compared.

3. Results

The result showed that at the national level, each year, the number of doctor applicants always exceeded the formations, while the structure of dentists still exceeded the number of applicants, except in 2013. Figure 1 and 2, they showed the national ratio of PTT applicants and formations for doctors and dentists from 2010 to 2015.

West Sulawesi, Gorontalo, Central Sulawesi, North Sulawesi, Central Kalimantan, and Papua were provinces that lack doctor applicants while Riau, Kepulauan Riau, South Sulawesi, West Sumatra, North Maluku, and Maluku were provinces with sufficient, even abundant number of dentist applicants. Figure 3 until Figure 14 showed the ratio of PTT applicants and formations in the region that stated above for doctors and dentists from 2010 to 2015.

Figure 3 to 8 showed six provinces that had suffered a lack of doctor applicants minimum two times. The other regions had never or only suffered the lack of doctor
applicants once. The highest ratio ever achieved was in Riau in 2015, showing that there was only one doctor formation applied by 17.67 applicants. The lowest rate also happened in 2015 in West Sulawesi, which one doctor formation asked by 0.18 applicants.

Figure 9 to 14 showed six provinces that had more dentists’ applicants than the other regions. The highest ratio ever achieved was in Riau in 2015, showing that there was
only one dentist formation applied by 5.14 applicants. The lowest rate happened in West Papua in 2014 which one dentist formation asked by 0.04 applicants.

4. Discussion

Personnel Bureau of Ministry of Health stated that there were 1,472 PTT doctors and 736 PTT dentists. Our finding and this data told us that doctors were more interested in
joining PTT than the dentist, but there was still no study that showed us the reason why this happened.

The other finding was that West Sulawesi, Gorontalo, Central Sulawesi, North Sulawesi, Central Kalimantan, and Papua were provinces that lack doctor applicants while Riau, Kepulauan Riau, South Sulawesi, West Sumatra, North Maluku, and Maluku were provinces with sufficient, even abundant number of dentist applicants. Some
studies stated that higher wages/salary increases acted as incentives to choose a rural area (Miranda et al. 2012; Hanson and Jack 2010; Holte et al. 2015) and this match with this study result. Based on the incentives data that was provided by the Personnel Bureau, the provinces that had more applicants gave additional financial incentives to doctor and dentist that work in their areas. Other than additional financial...
incentives, safety also plays a role in choosing an assignment area (conflict areas had fewer applicants than the safe ones).

To solve this problem, the Ministry of Health should conduct a study to find out doctors’ and dentists’ preferences for choosing a job in rural or remote areas, so the Ministry of Health can issue appropriate policies. During this time, the government raised doctors’ and dentists’ financial incentives, but it still could not attract more dentists in joining PTT.
This study had some shortcoming. First, the result of this study only showed the ratio of PTT applicants and formations in province level, not regency level. So, it could not confirm the uneven distribution within a province, second, this study used secondary data that did not have the data about doctors’ and dentists’ reason for choosing their assignment area, so this study can only tell us about doctors’ and dentists’ assignment area preferences without knowing their exact reason.
5. Conclusion

The number of doctors who applied for PTT was quite high, but the distribution was uneven (the island of Sumatera had the most senior applicants). The number of dentists who asked for PTT was still less than the demand. Government or researcher should...
conduct a study to find out doctors’ and dentists’ preferences for choosing a job in rural/remote/island areas of Indonesia.

**Acknowledgment**

Author thank the Bureau of Personnel of the Ministry of Health for the data and my colleagues who spent their time to proofread this work.

**References**


