

## IMPLEMENTATION OF INFORMATION SYSTEM TOWARDS HEALTH SYSTEM STRENGTHENING IN INDONESIA: A POLICY BRIEF

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In health discipline, Indonesia has been implemented new policy on health development that related to healthy paradigm which underlined health outcome as human rights.<sup>1</sup> In this case, health becomes national investment toward center of national development. In order to provide it, new national health system has arranges to answer and response every barriers of health development both for current and for future.<sup>2</sup>

Health system development should be engaged to decentralization policy that amended on Government Act/UU Num. 22, 1999. Government through Health Ministry issued Health Minister Act/Kepmenkes RI Num. 4/Menkes/SK/I/2003 for policy and decentralization strategy in health discipline.<sup>3</sup> It also supported by other act: Kepmenkes RI Num. 932/Menkes/SK/VIII/2002 for Guideline

of Municipal Health Information Systems (SIKDA) Development.<sup>4</sup>

Since the implementation of municipal autonomy (*Otoda*), every district/city was granted to develop and delivered its health efforts by their selves in order to improve health society. In the other hand, health information system in municipal should play as important role of the health outcome.<sup>5</sup> It should enabling to produce proper data and information in order to provide such as planning, implementing, controlling and evaluating in several aspects of the municipally health programs level.

Health information should delivering with accurately, time precisely and completely, so it becoming principal part for decision support.<sup>6</sup> Information technology (IT) promises all of this needed factors in order to support the organization operation. IT development affects to the organization system change that becomes

more efficient, namely information system (IS).<sup>7</sup> IS is essential thing, which derived of organization system that is enabling the information for needs assessment and solved the problem. Health information system (HIS) created to present valuable information and it should develop inside the health system both for problem solving and decision supports.

Currently, HIS is developing massively which is becoming particular matter in each of the health facilities. It is using to data processing that included of collecting, arranging, storing, analyzing, and presenting the data, which becomes quality information for healthcare. The quality of information could be relevant, accurate and time effectively as strategic decision support systems.<sup>8</sup>

The primary reason of HIS that using IT is essential to provide healthcare more effectively and more efficiently, without regretting both of the quality of care and the productivity of health professionals. In fact, it is strengthening the health facilities to achieve health society improvement.<sup>9</sup>

### **Highlights Sragen**

Sragen Technopark was a quite best experience of HIS implementation in developing countries particularly at Indonesia, at last until 2010. Although it has been terminated as it evaluated un-well proceed partly by the current era of Sragen Mayor, this E-Governance system was proved to work simultaneously between stakeholders in Sragen Government Offices.

Sragen Technopark was launched web-based Health Center Information Systems (*SIMPUS*) that linked between Sragen Health Office with all of health center (*Puskesmas*) and it has been initiated to support another stakeholder which related to health society improvement in Sragen Municipal. Data interoperability in *SIMPUS* could be

strengthened by various open source software adoption. It worked well using web-based and can be accessed by familiar application such as Windows, Macintosh, Linux, etc. It was developed by medical record, need assessment and it was applied with standard either of as well as government health offices or international data exchange, include HL7 (US) and CEN (Europe). This application was using to easy practice of data exchange such as telemedicine. *SIMPUS* was concerning to support healthcare framework both of primary healthcare and advanced healthcare. As a pilot project, Sragen Technopark was firstly implemented and it was hoped to assist population at large in order to understand of the healthcare facilities and it can be accessed either by internet included social media, integrated software, etc. or by conventional information with text messages.

The features of this software at following: (1) Patient registered, primary healthcare; (2) Patient health record; (3) Pharmacy; (4) Inter-interaction between drugs; (5) Disease diagnose guideline; (6) Maternal and child health; (7) Dentistry; (8) Healthcare quality focused (assessment time of each of patients) – towards ICD-X; (9) Biometric scanning supported by fingerprint; (10) HL7 and CEN developed; and (11) Online-access based report.

### **Political Issue**

This system is an IT innovation at Sragen Municipal for being digital district. It developed with considering that health outcome should become a base foundation in health prosperity. However, Sragen Technopark is the only memory from the past. It reminds us to realize that every program implementation could be interest for some people but it is harming for the others. Political willing is the un-neglected issue to consider on how the improvement of information system is not only about the

destination anyway; it is all about the journey itself.

### **Integrated Healthcare and Health System**

Instead, health development with information system has two-principle outcome. It is useful to create monitoring system for healthcare providers. Secondly, it focused on healthcare for population at large.<sup>7</sup>

Main problem on health data processing in remote area had attracted the government policy for the last over years.<sup>10</sup> However, insufficient coordination of central government with local government is fragmented the supporting infrastructure and medical devices (such as integrated information system in management and organizing) in all level of the provider's administration.

Integrated Recording and Reporting System on Health Center (*SP2TP*) is still partially-based on reflecting workload of health professionals that assumed un-well organized for efficiency and effectiveness of policy making.<sup>11</sup> Missed data dissemination due to un-match reporting form that happened in each of health center as one of the barrier factors related to data integrity. For this reason, computer-based *SP2TP* enabled health data continuity and sustainability, which lead to decision making on health programs.

Lastly, it is not only *SP2TP*, but also all of data management on health discipline at large that should be using computer-based information system massively. IT on IS shows better performance on problem solving related to all level of health information dissemination.<sup>12</sup> Although, Indonesia has been initiated to implement it on this decade<sup>1</sup>, however, it should be adopted not only in west area but also it have to take concern shortly in east territory of Indonesia. It needed fully commitment of

several parties that include IS provider (vendor) together with local/central government to provide well established IS toward data integrity on healthcare. At the end, it will be producing universal health coverage in all level of *Tanah Air* societies.

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