Introduction. Semarang City Health Office has been developing Health Management Information Systems (HMIS) since 2001. Development of HMIS in Semarang city is divided into several modules. One undeveloped module is the Medical Licensing Information System (MLIS). MLIS is an IS to manage personnel medical licensing data, include capturing, analyzing, publishing, and supplying information.

Methods. This study will describe the design steps of Web-based MLIS. Type of research is qualitative action research. The object of this research is the MLIS to support tasks in the Health Services Sector of Semarang City Health Office. Subjects in this study were divided into 2 internal users and external users of MLIS. Internal users consist of the Head of Semarang City Health Office, Head of Health Services Sector, and the Chief of Staff Referral Health Services Section, and the Chief of Staff Section of Primary Health Care (37 peoples). External users consist of medical personnel as MLIS customers (978 peoples), health policy maker, and the health center in the city of Semarang (206).

Results and Discussion. MLIS has the potential to be developed because of the problems, opportunities, and direction. Problems regarding IS are availability data and information, response time, accuracy, and ease of access (not meet fully the regional and national medical licensing regulation). The opportunities include support availability of hardware, software, brain ware, and policies. The users want IS that provide the information needed and using a web-based application that integrates with HMIS. Development of MLIS needs to fulfill operational requirements of functionality, technology and technical expertise, economic and otherwise feasible schedule. To fulfill those requirements, MLIS is developed using open source technology, they are MySQL for database, Apache and PHP for processing data input/output, and HTML/JS/CSS for user interface.