آلية تفعيل الإدارة الذكية للخدمات الصحيّة
(دراسة حالة: بلدة عين منين– محافظة ريف دمشق)

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الملخص:

تمثـل الخـدمات الصـحية واحـدة مـن أهـم المعـايير المعتمـدة لتقيـيم المسـتوى المعيشـي للمجتمعـات، فكلمـا ارتفعـت كفاءتهـا، تحسـنت حيـاة الفـرد والمجتمـع، لانخفـاض معـدلات الوفيـات المبكـرة، وانعـدام الأوبئـة والأمـراض الفتاكـة، ولا يمكـن أن يتـوفر هـذا المسـتوى مـن الرعايـة الصـحية، إلا بتطبيـق نظـم إداريـة مرنـة ومنظومـات صـحية متطـورة، تـؤمن هـذه الخدمات للجميـع. وبمـا أن جزء من كفاءتها يرتبط بالتوزيع المكاني لمنشآتها، فهي إحدى الموضوعات الجديرة بالدراسة في مجال الجغرافيا والتخطيط الإقليمي.

تسـهم الإدارة الذكيـة حاليـاً في إنشـاء بنـى تحتيـة – إلكترونيـة، تحقـق السـرعة، والدقـة، والفائـدة للمستفيدين من مؤسسات الخدمات الصحية، بأقل تكاليف ممكنة، وجهود مبذولة، ونفقات.

تبين من خـلال تقيـيم كفاءة توزيـع الخدمات الصـحية في بلدة عين منين، وجود خلل واضح في توزيـع الخدمات الصحية لأسباب تتعلق بحجم السكان في أحياء المدينة. مـا ينعكس سلبـاً على كفاءتها المكانية والوظيفية. لذلك تم اقتراح منهجية إدارة ذكية لتلافي هيوب المنظومـة التقليديـة الحاليـة، فمـع تـوفر شـبكات الاتصـال الخلـيوي، والتقانـات الحاسـوبية، يمكـن تطبيـق الإدارة الذكيـة كمـرادف أو داعـم للبنيـة القديمـة الموجـودة مسـبقاً. مـا يـوفر وصـول الخدمـة للجميع، بغض النظر عن التوزع المكاني الخاطئ لمنشآت القطاع الصحي.

الكلمات المفتاحية: الإدارة الذكية، الخدمات الصحية، كفاءة، عين منين.

Mechanism for Activating Smart Management of Health Services (Case study: Ain Minin town- Rif Dimashq governorate)

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Abstract:

Health services represent one of the most important criteria adopted to assess communities' standard of living. The more efficient they are, the better the lives of the individual and society, the lower the rates of premature mortality, the absence of epidemics and deadly diseases. This level of health care can only be available through flexible management systems and sophisticated health systems, which provide for all. As part of its efficiency is linked to the spatial distribution of its facilities, it is one of the topics worth studying in the field of geography and regional planning.

Smart management currently contributes to the creation of electronic infrastructure, achieving speed, accuracy, and benefit to beneficiaries of health services institutions, at the lowest possible cost, efforts and   expense.

By assessing the efficiency of the distribution of health services in the town of Ayn Minin, there was a clear imbalance in the distribution of health services for reasons of population size in the city's neighbourhoods. This has a negative impact on their spatial and functional efficiency. An intelligent management methodology has therefore been proposed to avoid the current traditional system's hindrance. With the availability of cellular networks and computer technologies, smart management can be applied as a synonym or supporter of pre-existing old architecture. What provides access to service for everyone, regardless of the wrong spatial distribution of health sector facilities.

Key Words: Smart Management, Health Services, Efficiency, Ain Minin.

 search terms:

- Health Services: a set of programs and activities aimed at preventing and addressing community health problems as they occur.(953 .2022 .القرني)

- E-governance: is an integrated electronic system, which aims to transform the normal (manual) administrative work into a computer-based administration, relying on information systems that help in making administrative decision as quickly as possible and at the lowest cost.(3 .2020 .صيفي) .

- Smart Management: The system of technology centres causal technology to achieve transparency and periodic development of health services, and its management system. It consists of four components: measurement, recognition, assessment and evolution. (Nakajima.2011. 76).

1- Introduction:

The development of service sectors, including health services, through the adoption of smart management (electronic) applications has become an urgent need, given the availability of modern, cheap technical capabilities, such as mobile phones, computers, cellular communication software and applications. What can offer a flexible alternative to fixed spatial distribution of physical facilities, reduces the volume of paper-office transactions, solves the problem of centralization of health services, and the imperative of personal presence of medical personnel within its approved units.

2- Spatial and time limits for research:

The town of Ayn Minin is located in the north-east of Damascus, Syrian Arab Republic, approximately 16 kilometres away, and lies on a width circle (33.37) and a longitude (36.29). Figure.(1)

The time limits are expected to be between(2030-2024) .

Figure 1: Location of the town of Ayn Minin from Damascus countryside.
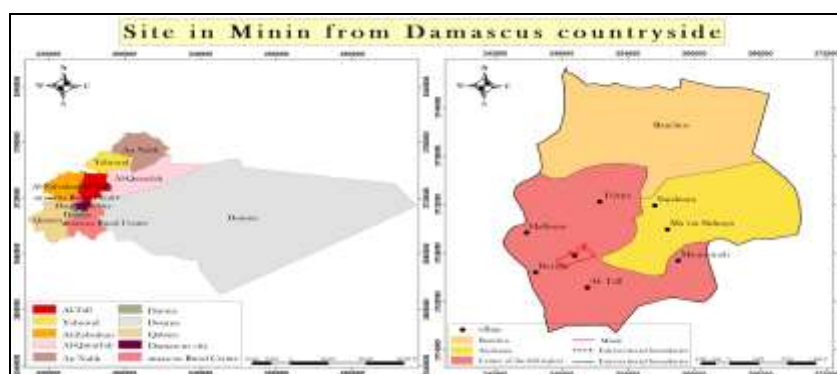
(Source): Researcher's preparation using GIS technology, ArcGIS Desktop 10.8

3- importance of research:

The importance of research, by proposing an intelligent management methodology for health services in the town of Ayn Minin, is reflected in support of the current system, which suffers from poor spatial distribution, and possibly the future replacement of the flexible and accessible smart system.

4- research problem:

The problem of research is the deterioration of the service sector in general as a result of the war against Syria. The lack of access to some health services in one facility but not others, as well as medicines on the one hand, and the provision of individual and special electronic infrastructure, helps to solve problems even in part. Service and commodity enquiry becomes an electronic means of saving effort, money and time. The problem of research can be identified by asking the following questions:

1. What is the concept of smart city, smart management.

2. What are the pros and cons of applying smart management at the level of health service delivery؟

3. What are the obstacles to applying smart management to the delivery of health services؟

4. How can smart management methods be applied in the town of Ain Minin؟

5- Research Objectives:

1) Identify the concept of smart management and its props and constraints.

2) Determining the components and importance of health services.

3) Assessment of the state of health services in the town of Ayn Minin.

4) Propose a methodology for the smart management of the town's health services, including hospital, pharmacies.

6- Research curricula:

The theoretical nature of the topic imposed the use of inductive, descriptive and analytical methodologies to assess the health reality of the town and to understand the spatial relationships between the components of the town's health system. In the research methodology, the problem was presented by assessing the current state of health in the town of Ayn Minin and then using some global and Arab experiences in smart service management.

7- previous Studie:

 I took a study of Tarash. Hamari. 2021. 188) The concept of smart cities, as a combination of three key elements (technical, social, environmental), and its most important characteristics and features with a case study, Dubai City, with the identification of smart management indicators, such as for economy, capital, social format, environment, governance, urban planning, international communication, technology, and transport. It was ranked first regionally in the Middle East, as a smart city between 2012-2018. and the second between (2019-2020). It is ranked (30) globally for the years (2012-2013-2015).

Bhattacharya. 2023) It emphasized that the cornerstone of health system planning health services ", is to locate health services for the communities that aim to serve them, Ensuring that appropriate services are accessible to the population and that no one is denied basic services Through the effective response secured by GIS, GIS is a powerful tool used to solve many important health challenges, from improved services to disease management. and communication between hospitals and the communities they serve.

 GIS technology can help collect, periodically update and analyse data, where they are most needed, interact with decision makers and achieve health justice that can be created with the help of a site-based strategy. In order to achieve the goal of universal health coverage, four conditions must be met:

Availability, access, quality, utilization. It can do so by identifying each health-care provider's point and distance data on the population of the region. To protect data privacy, appropriate anonymity techniques must be used to collect data and disclose details about its use and quality.

Rizk & Others. 2021.32-37) is part of the Egyptian experience, in the smart management of hospitals, through the so-called Internet of Things (IoT) by replacing its old government systems with smart electronic technology. IoT devices produce different types of data and transmit them to computers for storage and analysis. What helped to save effort, time, money, and provide security and privacy in managing patients' files. The research proposed a new technology system called Cyber Physical Systems (CPS) and introduced a structure that uses CPS and wireless sensor networks (WSNs) to use healthcare applications in computing, and the

structure is divided into three parts based on the use of healthcare applications such as surveillance and decision support systems. The first part of the structure is the communication part, then the computing part, the last part of the proposed CPS healthcare structure is the resource management part. The proposal for emergencies can be applied in principle.

I sought to study Al Faidi. 2021. 446-447) to diagnose the reality of the operationalization of ICT and its role in improving health services by public hospitals in Ain Tadless in addition to knowing the extent to which ICT contributes to the improvement of health services in public hospital institutions, It relied on a questionnaire that monitored the views of samples of the technology's services to patients and health management and that one of the most important benefits of these applications is the provision of medical and health service to the patient by the doctor, even if the latter is outside the scope of his work (Hospital or clinics) and that the speed of opening and browsing many files via mobile device, shortened the time in making the right decisions.

While I aimed to study the Qurnian. 2022. 946-984) to identify the impact of e-governance on the level of health service delivery during the coronavirus pandemic. The study was limited to the employees of King Abdullah Medical City in Makkah, through the four dimensions of the department, namely: Telecommuting, business re-engineering, electronic leadership and digital integration. One of its results is that e-remote management has greatly contributed to enabling workers to provide services to patients through electronic platforms. It has also enabled workers to provide consultations via video and telephone, provide basic patient care and monitor the situation with mediocre specialists.

8-   theoretical framework:
I /8 -concept of smart cities
A. Definitions Smart City:

(Mohanty & Others. 2016. 1) Smart city is primarily a concept, and there is still no clear and consistent definition between practitioners and academia. In a simplified definition, a smart city is where traditional networks and services become more flexible, efficient and sustainable using information, digital and telecommunications technologies, to improve their operations for the benefit of their populations. Smart cities are greener, safer, faster and friendlier.

While Tosh, Hamari. 2021. 190-191) Several definitions of smart cities:

• A city that uses ICT to improve its population's quality of life while providing development. But it is a diminished definition that has only one dimension of Smart City, which is technical.

• It is an urban gathering with three main components: technical, social and environmental. They are three cities in one, namely: virtual/informatic, cognitive and environmental. Where the virtual world meets reality.

• It is a city based on a set of fundamental dimensions: technological, environmental, social, natural, economic, with a strong and intelligent economy, smart society, integration of information technology infrastructure, preventing pollution, protecting the environment and aiming at improving the quality of life of individuals, under sustainable development, to preserve the rights of future generations.

It expanded (algebra, jasim. 2019. 175) In their definition of Smart City, it is: where telecommunications services such as advanced information technology are available. Which relies on the idea of connecting public places in the city, such as airports and markets, parks, hospitals, parks and public gathering places in the city, by using sophisticated communication techniques, so that its residents can use their mobile devices and contact all institutions and organizations to complete their work.

B. Smart City Advantages:
Smart City must meet the following (for Tarash, for Hamari. 2021. 193) (algebra, jasim. 2019. 180):
1-Be able to implement infrastructure management.
2-The Smart City is confident of improving the quality of life of its inhabitants.

3- Supporting growth and innovation, and continuing reliance on state-of-the-art technologies.

4- The Wireless Sensor Network (WSN), a network of intelligent sensors to measure many transactions and simultaneously transmit all data between the citizen and the Authority.

5- Providing various services to residents and companies, such as flexible traffic networks, and fast and safe communications.

6- Attracting foreign investment by providing a safe, flexible and sophisticated environment.

7- Provide a safe environment, available energy and high-level services.

8- Expanding the participation between the population and the city administration, to make decisions that are in everyone's interest.

II/ 8 -Concept of health services.

Ealth services are defined as the benefit to the beneficiary that he receives when receiving the service and which achieves a full state of physical, mental and social integrity and not only the treatment of diseases and illnesses. Health services include both (pumpkins, Fayek. 2013. 50):

1. Preventive services: which include disease control, environmental health, food control, provision of clean water, adequate housing, waste disposal, insect control, air purification of smoke and soil, and noise disposal.

2. Treatment services: Treatment services at various stages in outpatient clinics, public and private hospitals, specialized hospitals, home care, vocational rehabilitation and doctors' clinics.

In 1948, the World Health Organization (WHO) defined health as not only the absence of a disease, but also an integral state of mind, mind and social well-being (Hatless). 2000. 6), this definition contains three axes: natural or physical health, which is an important component of overall health. and mental health affecting physical health and vice versa.

We cannot isolate health from the individual's social and cultural environment, which cannot be promoted and changed without raising the health level of the population and society. As an indicator of the development of these services, the number of physicians, specialists, dentists or pharmacists is taken for every 10,000 inhabitants and the corresponding nurses, intermediate professionals, the number of hospitals and beds in them, as well as the number of clinics, and we must distinguish between three concepts of the health service (dibs). 2005. 377):

1) Medical care: means individual services provided by doctors directly or as a result of their guidance.

This medical care varies into hospital residency care or even stay at home with medical supervision of the patient.

2) Health services: includes the organization and provision of medical services and human resources supervising their implementation, as well as the work and tasks carried out in this field in order to preserve the type or the health of individuals and monitor them in general.

3) Health care: Includes medical care and services as well as health education, health information on disease control and resistance, initial diagnosis and treatment.

Since geography is a science of distributions and relationships, the geography of health care examines the distribution of health care services and their relationship with each other and with the place in which they are distributed within a complex and interdependent system.

The nature of the provision of health care depends on the nature of society and the perceptions of health prevailing in that society (dibs. 2005. 377).

9- Outcome and discussion:

1st. Geographical overview of the town of Minin:

The town of Ayn Minin is south-west of the Qalamoun mountain range, surrounded by several mountain blocks, such as Jabal Mar Teqla from the north-east (1265 m), Ayn from the north-west (1312 m), Berta from the south-east (1397 m), lentil fields from the south (1285 m), and Makara from the west (1350 m).

Image (1): Ayn Minin Mountains   (Source): S A N A

Climatically, a Mediterranean, semi-dry mountainous climate prevails because the area is generally situated in the shadow of Mount Lebanon East, with summer temperatures ranging from 10 to 30 degrees Celsius to winter from 5 to 15 degrees Celsius, and the town is affected by western and south-western winds. While rainfall ranges from 150 to 200 mm/year (Public Meteorological Corporation), Aim Minin's spring is the most important water resource with a magnitude of 400 l/tha, one of the six springs belonging to the town.

Ain Minin's population in 2004 was 19,340, rising in 2022 to 27,000 (Ain Minin Municipality). without residents arriving from neighbouring areas. The town has a high gender ratio, with 106 to 100 females in 2022. With regard to the age structure of society, the age group under 15 was 23%, and adults between 15-60% accounted for 71%. However, accurate data show that the proportion of persons aged 15-19 is 17.6%, followed by 20-24%. (Central Bureau of Statistics).

2nd. Assessment of the status of health services (hospital-pharmacies) in the town.

A. Classification of health services and services in the town of Ayn Minin.
B. Spatial distribution of health services.
C. Service efficiency indicators.
D. Spatial distribution problems.

A) Classification of health services and services in the town of Ayn Minin:

I. Central Health Clinic:

Officially state-owned, updated in 2018, located in the Swayd neighbourhood, with an estimated area of approximately 500 m2, Photo No. 8, serves every neighborhood of the town. The clinic provides treatment services to patients, conducts vaccine campaigns for certain diseases such as measles, smallpox, malaria, baby paralysis, corona, etc., and receives school cases in the town.

The center comprises (1) GP, (2) gynaecologist, (1) nurse, (1) laboratory technician and (1) pharmacy, and there is a clinic for the treatment of chronic diseases, which provides free medication to patients, and through statistics show that the number of reviewers who receive medicines (700) illnesses per month (depending on availability of medication) and provided free of charge. The number of reviewers per day and month for 2022 was estimated to be approximately (100) revisers outside working days (Minin Health Center. 2022), table 1 shows the number of Minin Health Centre auditors per day and month. The large number of reviewers puts considerable strain on the health services provided, especially the days of vaccine campaigns.

Services include: General Treatment - Oral and Dental Health Services - Pregnant Care and Family Planning - Vaccine - Nutritional Monitoring - Laboratory Analysis - Chronic Disease Treatment - Aged Care - Chronic Disease Treatment - Health Control - Incentive Angle for Children - Health Education - Epidemiological Monitoring - Psychological Support). There are also out-of-service medical equipment because there is no medical specialist.

Photo (2): Syrian Arab Red Crescent (source): Field study

competence	number	competence	number
dental	43	Internal-nerve	1
Women and obstetrics	3	Internal-deaf glands-diabetes	2
Ear throat nose	2	Urinary and reproductive	2
bone	3	General Surgery	1
children	7	Waistcoat	3
cardiac	1	Infertility	0
Leather and Beautification	2	Indoor-Waistcoat	1
Family Medicine	1	Indoor-Waistcoat-Heart	1
nerve	1	Indoor-waistcoat-digestive	2
digestive	1	Interior-Women-Children	1
eyes	2	Internal	1
Internal-nerve	1	Indoor-Kids-Leather	1

Source: Minin Health Centre 2022 data

2- Syrian Arab Red Crescent center:

Located in the Shamis neighbourhood, photo No. 10, affiliated with the Syrian Arab Red Crescent, where there is a first aid point, which includes (4) doctors (general surgery), (2) internal doctors, (1) pediatricians, (1) gynaecologists, and (4) nurses, (4) beds and (2) ambulances with
All the equipment is inside it, as well as 48 paramedics in the ambulance staff, where the ambulance
stays 24 hours at all times.

Reviewers	Day	Month
Reviewer / Doctor	70-60	1800
Vaccination and vaccines	70-50	1750
Maternal care	-	20
Childcare	20	550
Laboratory tests	1-0	30
Dental clinic	10-7	211
Pharmacy	50-40	1200

Table 2: Private clinics in Ayn Minin
Source: Based on data from the field study

At medical point (1) there is a medical analysis laboratory, (2) a pharmacy and (3) clinics and at each nurse's clinic. Medical equipment includes: (4) spray devices and (4) oxygen sockets (2) heart layout devices, detachments pulling device, alarm tools, set-top devices and ambulatory needles.

The medical point covers every day about 50 patients and works every day except on holidays, while the ambulatory point covers 100 cases per month and works every day 24 hours (Syrian Arab Red Crescent data).

From the foregoing we find that the crescent covers more than the clinic due to its presence at all times, while the clinic is disabled on holidays, and working hours are limited. Photo (2).

3- the Private Medical Centre:

Al Shifa Center is a private center located in the center of the town of Ayn Minin opposite the roundabout, with a total area of 275 m2, consisting of 11 rooms, the number of medical personnel 7 doctors there are all medical specialties and includes a laboratory and radiography, serving the whole town of Ain Minin, operating 24 hours, where there are doctors and nurses on duty at night for ambulatory cases.

4- private clinics:

A facility for the provision of health care, simple medical and therapeutic advisory services and first aid for a certain material wage. Emergency cases are transferred to the hospital and there are 85 private clinics in the town of Ayn Minin (field study).

Clinics are spread infrequently. They are concentrated in the middle largely while the edges of the town almost disappear, the town has different specialties where the foremost of them are dentists. Table 2 shows the numbers of clinics according to the specialties.

5- Laboratories, radiology centers and shops that provide Eye Minin with medical equipment:

The laboratories are private laboratories where these laboratories perform tests for patients by medical analysis of them whether it is (chemical - blood - microscopic). Ain Minin has a centre for the sale of medical equipment and several medical laboratories. Table 3 shows the types and numbers of laboratories in Ain Minin.

Table 3: Medical laboratories

lab	Number
Medical Analysis Laboratory	3
Dental Imaging Laboratory	1
Dental Compensation Lab	2
Radiography Laboratory	0

Source: Based on field study

6- pharmacies:

There is a large number of pharmacies in the town of Ayn Minin, where it was estimated that 33 pharmacists were employed in this field. Through the field study, pharmacies are not distributed regularly and exceed the legal distance. The standard applied in its distribution is the legal distance to be provided between each

pharmacy, which does not exceed 35 metres in the rural service areas (districts, villages and towns), the minimum pharmacy area is 20 metres, and the pharmacy must have no more than one outlet, i.e. an outlet other than the entrance door (Mohammed Saadu Shahab. Ain Minin, ((interview)) 21/3/2023.)

B. Spatial distribution of health services.

The decision to locate health services, in particular pharmaceutical services, not only in terms of costs to users but also the spatial distribution of housing development demand is important and has a significant impact. Supporting timely access to medicines and professional pharmaceutical services for all people is one of the strategic goals and a challenge for any developing society.

The clinic and the Red Crescent are among the most important health centres serving the population. We note the concentration of most services in the town centre and on the main road due to the availability of most of the main services from water and transportation, and due to the coldness of the extreme neighbourhoods located on the mountains. Figure 2.
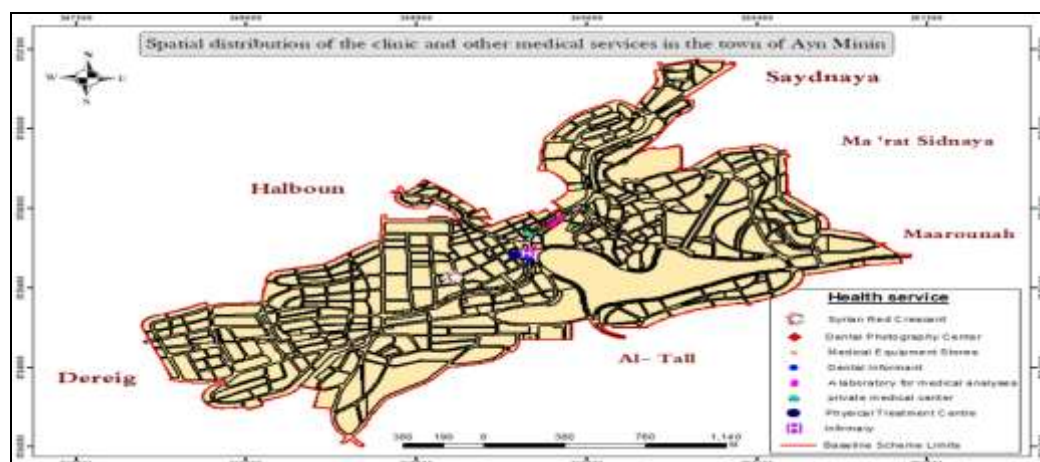

Figure 2: Dispensary's spatial distribution and other health services
(Source) GIS researcher's work, ArcGIS Desktop 10.8 based on field study.

Figure 3 shows the gathering of clinics in the town of Ayn Minin and from each group with several specializations, and we note the concentration of clinics
In the middle of the region, this is due to the aforementioned reasons and given the
Because this area is the most overcrowded area.
We note that there are several competencies in this area and the neglect of the second areas, which makes it imperative for its inhabitants to go to the town's centre.
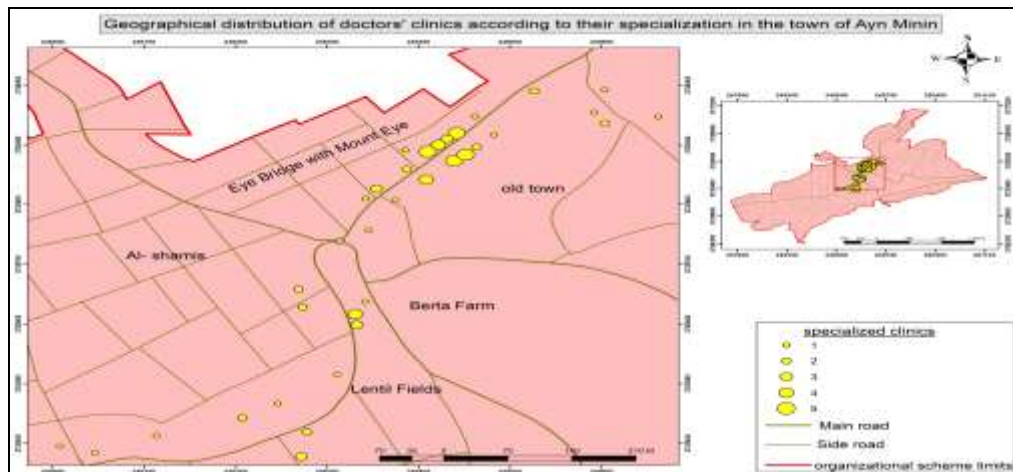
Figure (3) Spatial distribution of doctors' gathering in Ayn Minin
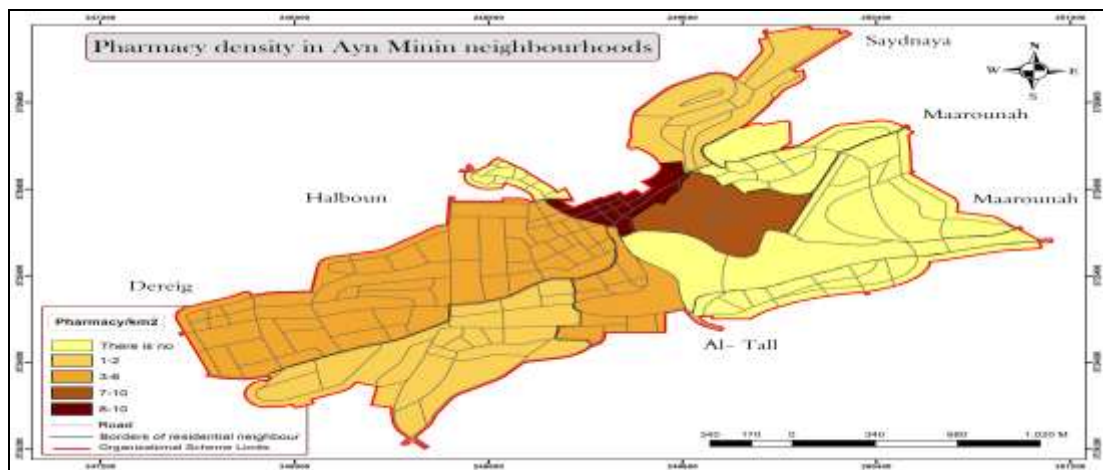**(Source) GIS researcher's work, ArcGIS Desktop 10.8 based on field study.**

Figure 5. Pharmacy density in Ayn Minin.
(Source) GIS researcher's work, ArcGIS Desktop 10.8 based on field study.

- Figure No. 4 shows the distribution of pharmacies and their focus on the main road in the town centre. This is due to the aforementioned reasons. The coordinates of each pharmacy were taken from google Earth by placing the coordinates points of each pharmacy site and then saving and exporting it to Arc gis.
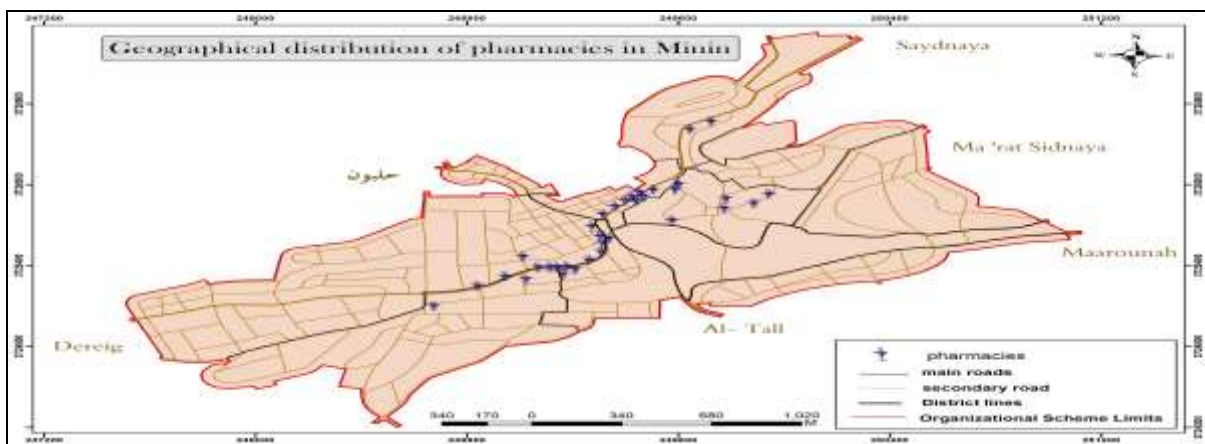
Figure 4 Pharmacies distributed in Ayn Minin
(Source): Researcher's preparation using GIS technology, ArcGIS Desktop 10.8

C. Health service distribution efficiency indicators.

Indicators of efficiency in distribution of health services include population size, area coverage, adherence to legal standards, distribution pattern and easy access to health services at the Ayn Minin level.

A map is designed showing the density of pharmacies in the neighbourhoods of Ain Minin town. Light-colored colors are found in a few pharmacies, while in darker-colored neighbourhoods the number of pharmacies is increasing. This is an indicator of the poor distribution of pharmacies. Figure No.(5) .

*   Impact range: service coverage for pharmacies in Ayn Minin according to standard (35 m) established by the Ministry of Health as a distance standard in the countryside As shown in figure 6, the service is located in the centre of Ayn Minin, where its coverage appeared fully at the centre, neglecting the parties of the area that did not reach the scope of the service, prompting the applicant to travel long distances to reach it due to the above reasons, This means that half of the town of Ayn Minin has not reached service in its east and west And we note that the scope of the effect overlaps with some neighbouring pharmacies, which means that there is an excess of the legal distance criterion.
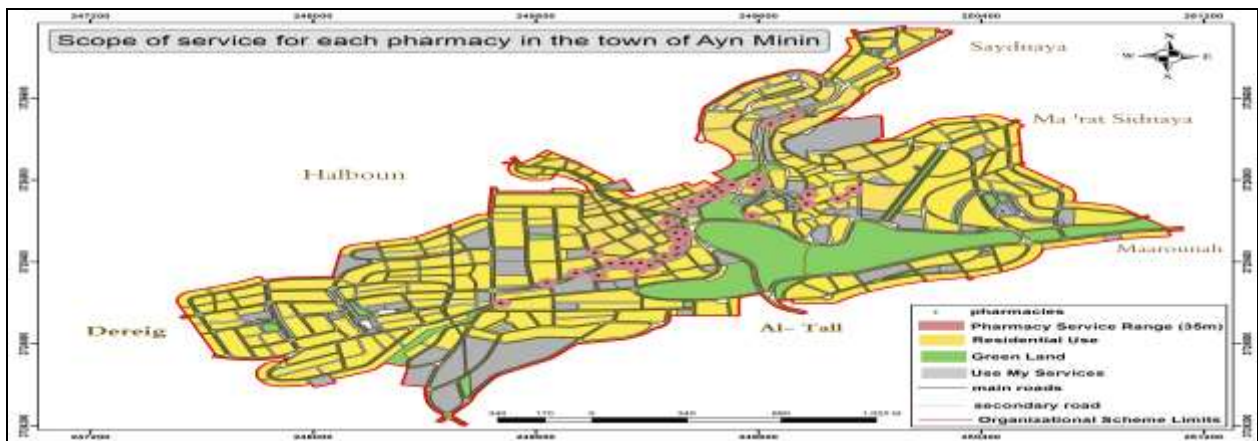
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Figure 6: Scope of service for each pharmacy in Ayn Minin

(Source) GIS researcher's work, ArcGIS Desktop 10.8 based on field study.

Figure No. 7 shows the number of beneficiaries of pharmacies and specialized clinics in each of the neighbourhoods of Menin town. We note the highly efficient Al Ain Bridge neighbourhood in return for the Melon Division neighbourhood, Camp Road and others lacking services.
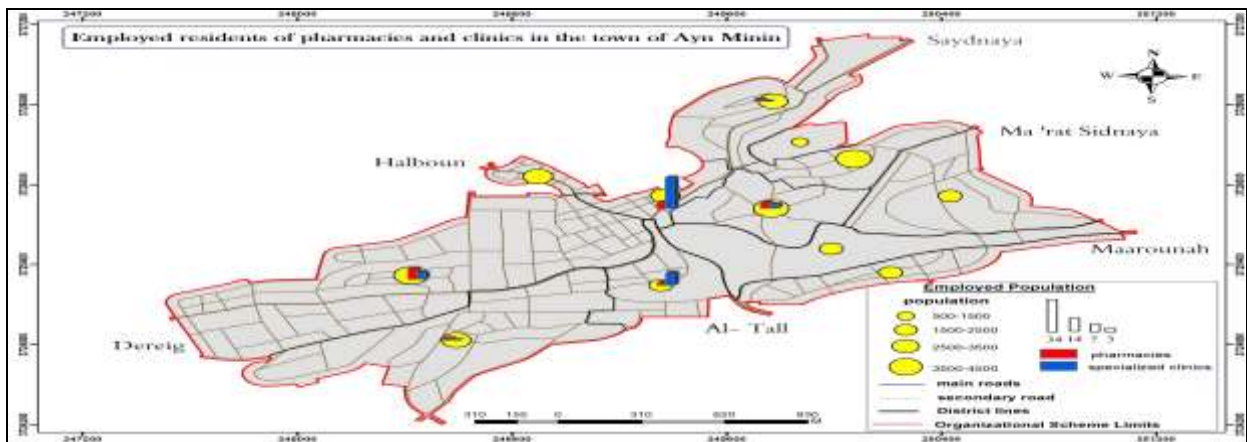

Figure 7. Employed population of pharmacies and specialized clinics in Ayn Minin
(Source) GIS researcher's work, ArcGIS Desktop 10.8 based on field study.

These indicators contribute to evaluating the benefit of our health services through their current spatial distribution, thus helping to assess their efficiency, and contributing to a vision for problem solving if any.

D. Spatial Distribution Problems:

One of the main problems experienced by the residents of Ayn Minin is the lack of a private hospital in the town, where difficult cases are diverted to the hospitals of neighbouring areas, and often to the Zahra Hospital in the hill. When necessary, the residents go to the private centre and medical clinics and their cost is high.

The field study also showed that there were a large number of pharmacies in gatherings but not others, thus not achieving their ideal distribution, and that the shifting hours were concentrated in the town centre and deprived of the population's limbs. Figure 8 shows the spatial distribution of pharmacies in the centre of Ayn Minin.
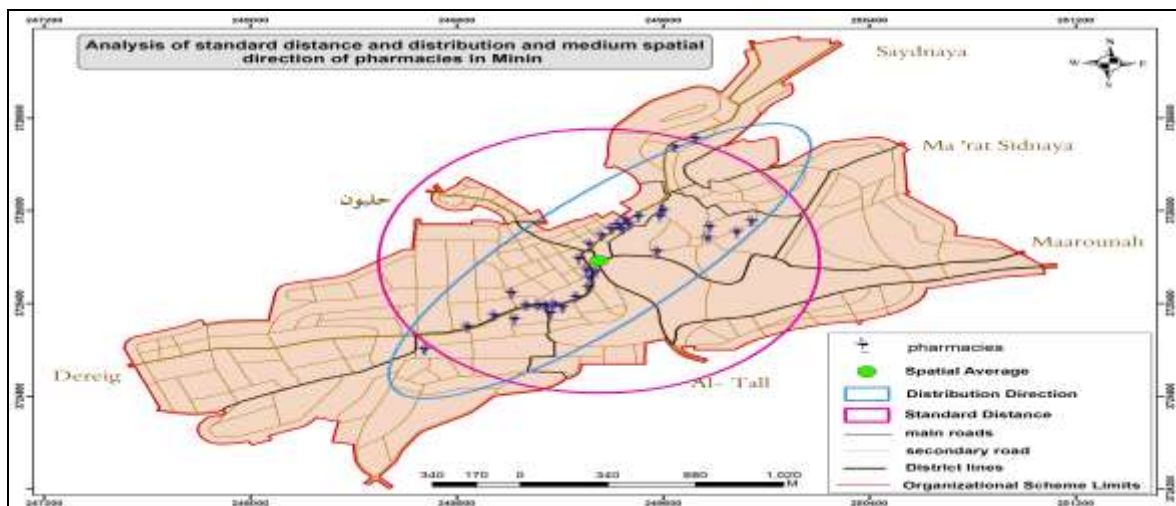
Figure 8. Analysis of standard distance, distribution and medium spatial direction and distribution of pharmacies to the town of Ayn Minin

(Source) GIS researcher's work, ArcGIS Desktop 10.8 based on field study.

3rd. Practical framework (applied):

1- Proposal for the methodology of smart management of health services (pharmacies) in the town of Ayn Minin.

Healthcare facilities from hospitals and pharmacies are among the most important sectors requiring much attention to move the old documentation model to Smart Management smart management systems. It is necessary to analyze health data in order to increase the quality of patient care. The application of smart management in pharmacies includes many innovative methods. For example, the smart pharmacy system integrates sorting, storage and surveillance units to efficiently automate distribution processes and ensure safe drug management, and the foundations to be adopted in app programming can be determined, as follows :

1) Connect pharmacies to the proposed network, to exchange medicines as easily as possible, and the appropriate speed to raise their efficiency.

2) The Pharmacies Database includes the availability of price medicines to make the consumer's multiple choice areas available.

3) The database includes all personal information about each beneficiary, to serve as a health-medical archive for him.

4) The presence of special radio points, to access emergency departments as quickly as required and address them with voice and image in case of special emergency.

5) Connecting hospitals to the homes of special patients with special and critical conditions to follow up their health condition and warn them in case of deterioration of the patient's health automatically such as following the ECG signal.

6) The proposed program connects all parties of the health system, including administrators, doctors, patients or beneficiaries, to provide services through it at any time even outside the limits of the time or place.

7) The proposed program connects all parties of the health system, including administrators, doctors, patients or beneficiaries, to provide services through it at any time even outside the limits of the time or place.

2- Expected positives of the proposa:

1. Secure services at any time possible, and for any person. without any conditions, restrictions or impediments.

2. Saving the time spent on paper transactions.

3. Provide the expenses of searching for the best service center according to the citizen's need. in particular for emergencies.

4. Control the consumption of medicines and treatments, in order to prevent their trafficking, through the accurate and automatically updated database.

5.   Preventing personal interventions in management and preventing corruption in order to achieve the desired justice in access to medical and health services.

3- Obstacles and disadvant:

The most important obstacle is the smart management in all Syria, with no Internet service available throughout the day, but mitigating this barrier, that the proposed network uses are when necessary, which is available even in individual mobile phones.

4th. conclusions and proposals:

1. The research found that pharmaceutical services are not well distributed, so GIS can be used efficiently to redistribute pharmacy sites and choose the appropriate location for new pharmacies.

2. The proposed reference model for an intelligent management system to achieve best performance

3. When applying the smart management model, the medicines will be accessed without passing through the pharmacies on the site.

4. The main objective is to provide an intelligent management platform where various health services operate as a single unit to facilitate access and regulate their distribution.

5. The aim is to provide a smart management platform where various smart health services can work coherently for users.

5th. Recommendations:

• Build a health and medical database, updated automatically.

• Integrate smart management with conventional in the first phase of application evaluation.

• Replacing smart management, completely replacing the traditional if the experiment is successful.

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