

Health Decisions Made Easy



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KFSH&RC is a multi-facility, multi-entity tertiary care hospital and one of the leading healthcare institutions in the Kingdom of Saudi Arabia.

The mission is to provide medical services of highly specialized nature and promote medical research and education programs, including postgraduate education training, as well as to contribute towards the prevention of various diseases.



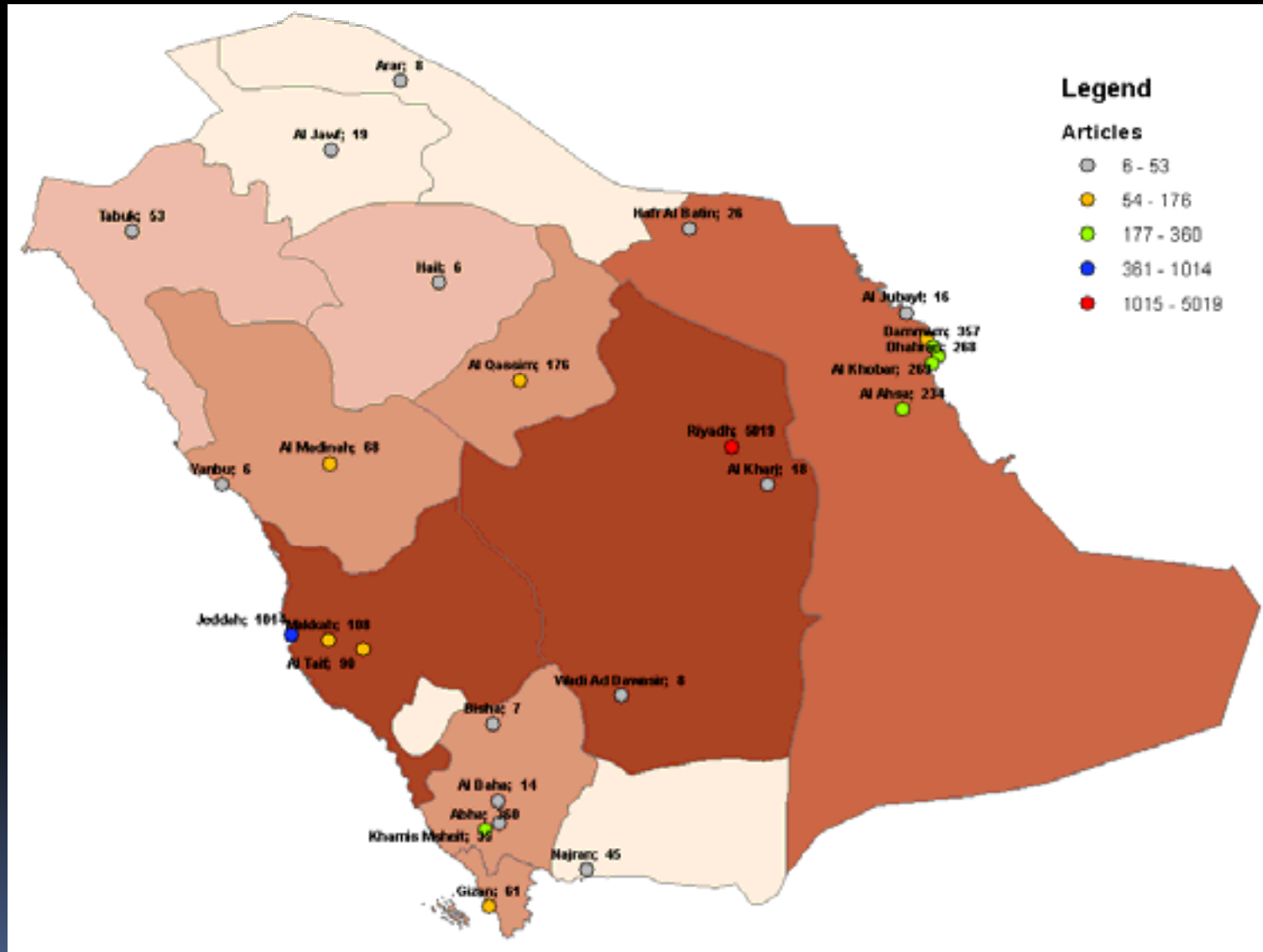
Uses of Research Data

- ✓ Spin-off studies
- ✓ Resource allocation
- ✓ Health planning
- ✓ Evaluation of clinical and public health programs
- ✓ Cluster investigation



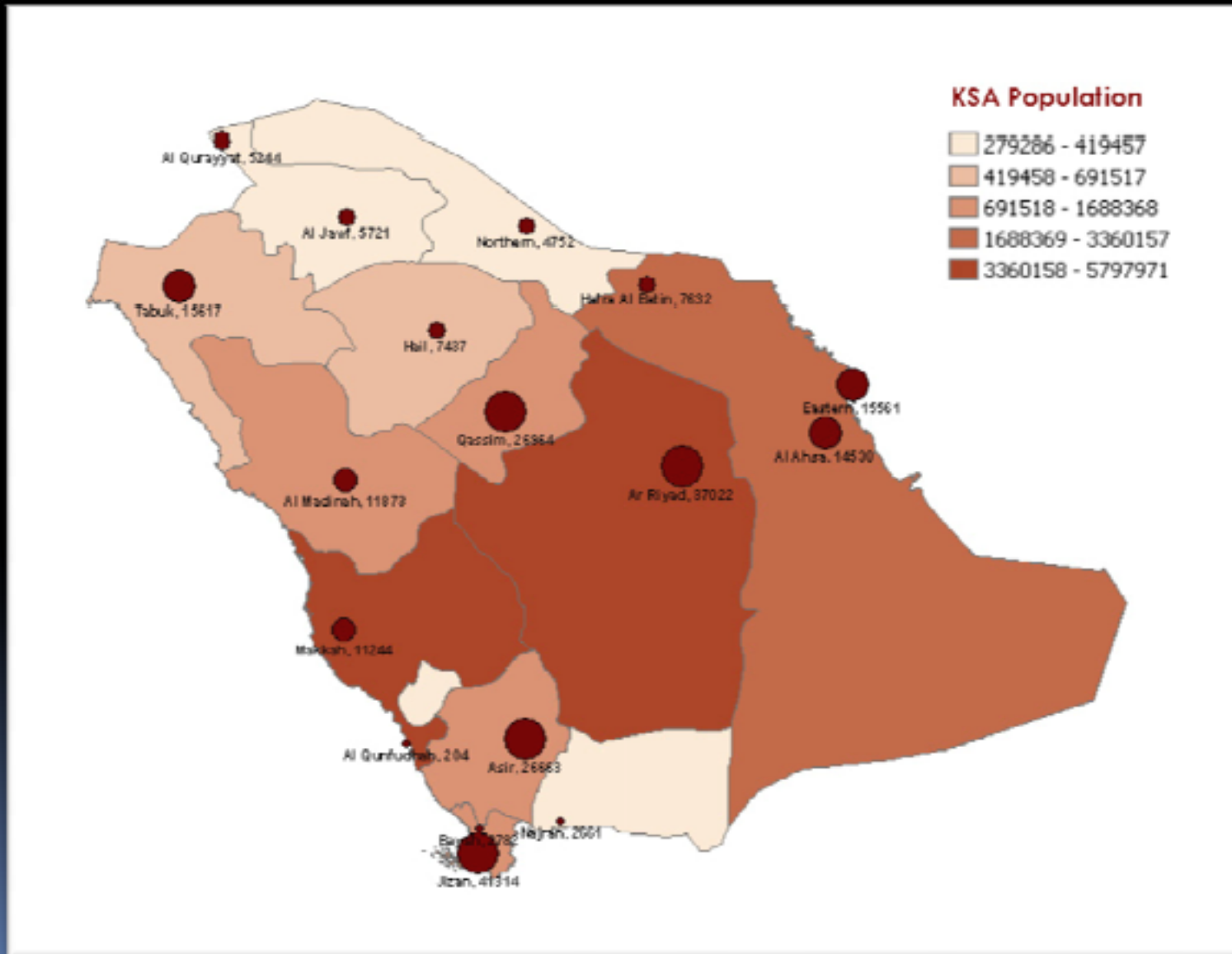
Health decisions are becoming increasingly evidence based

City Level Distribution of Publications from KSA



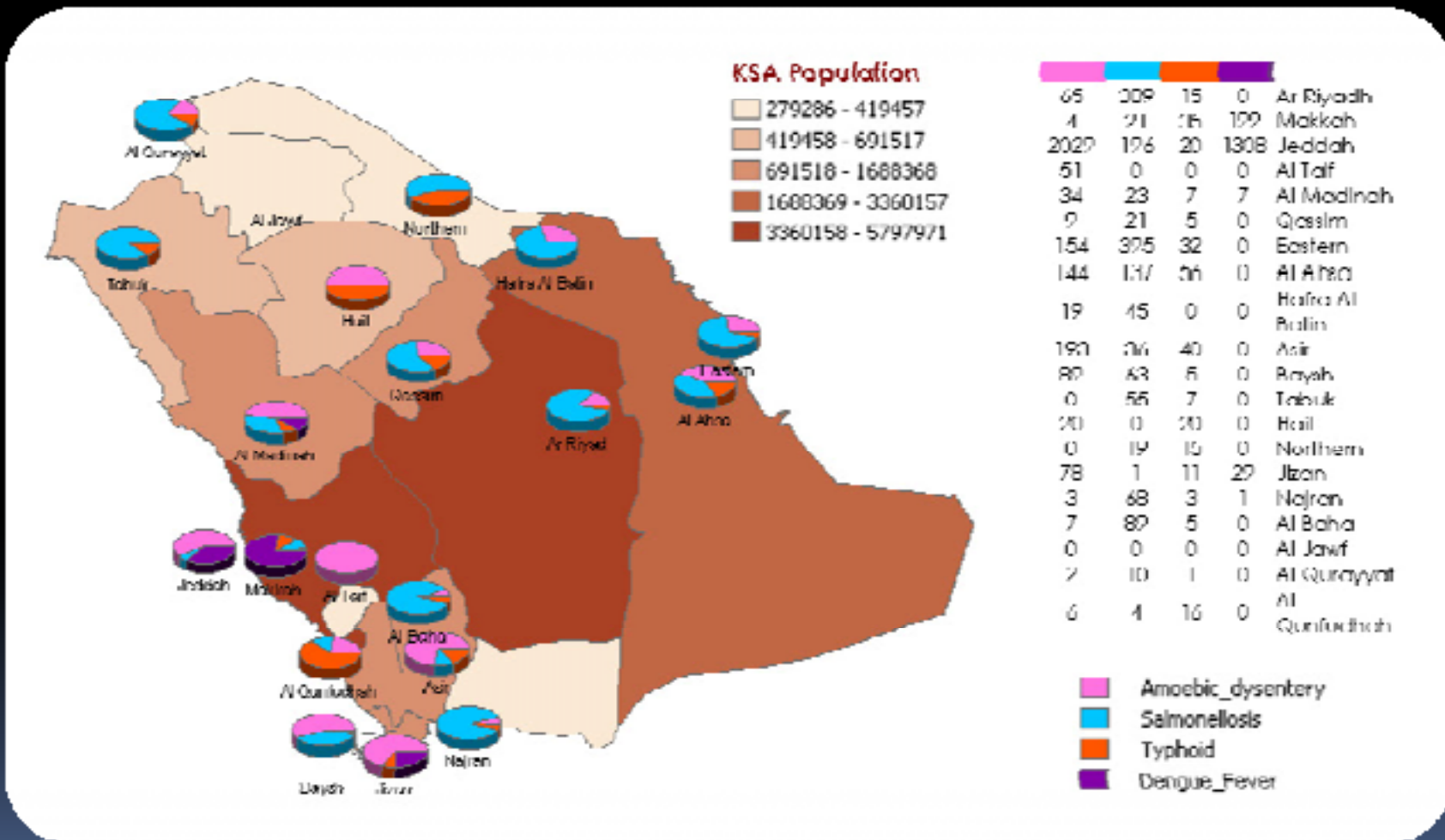
Infectious Diseases in the Kingdom of Saudi Arabia

Data obtained from KSA Health Statistical Year Book for the year 2006



Regional Distribution for Various Communicable Diseases

Data obtained from KSA Health Statistical Year Book for the year 2006



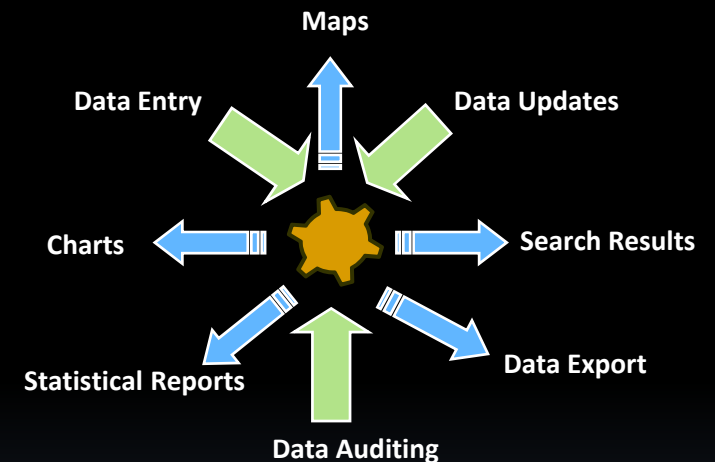
Web-Based National Registries

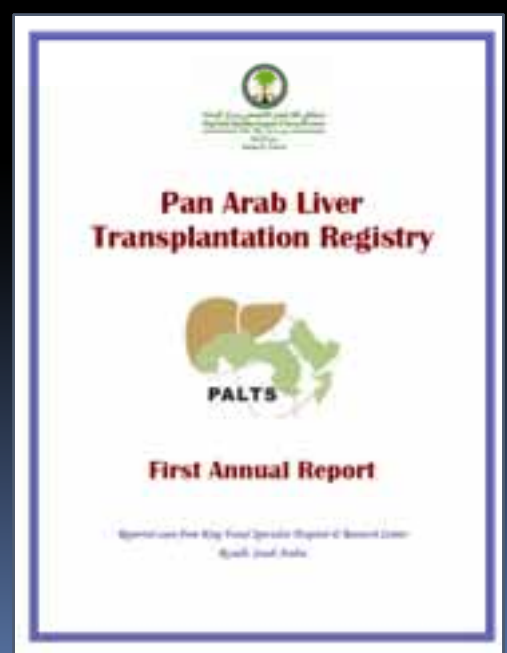
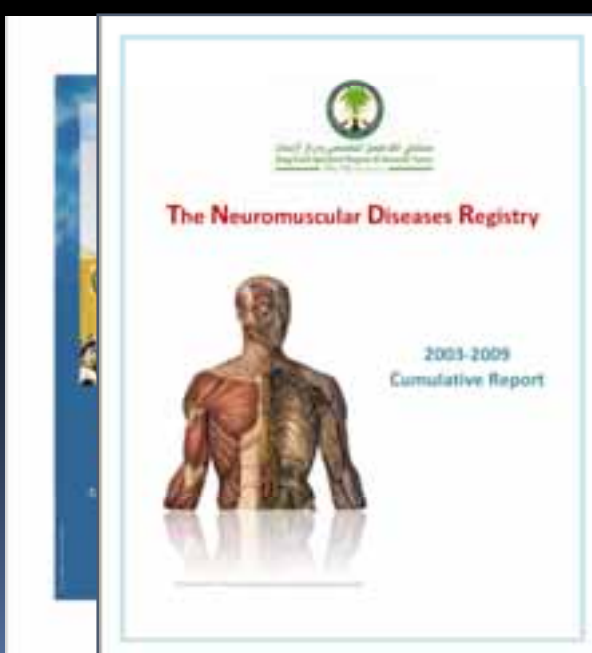
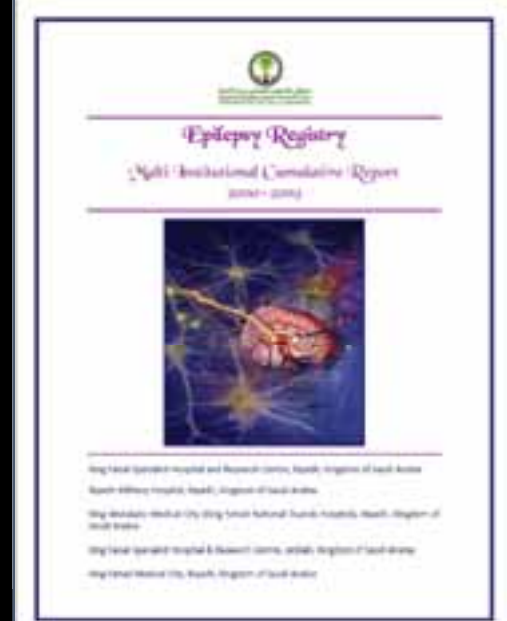
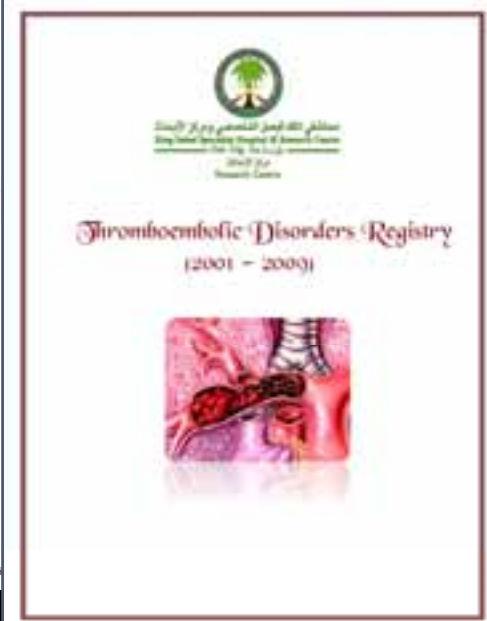
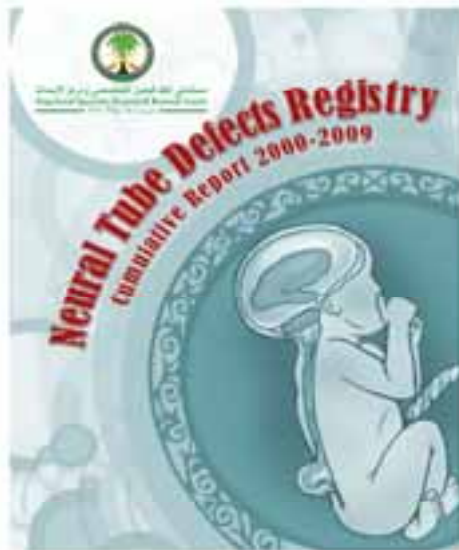
- National Cancer Registry
- National Diabetes Registry
- National Congenital Heart Defects Registry
- National Epilepsy Registry
- National Neural Tube Defects Registry
- National Family Safety Registry
- Pan Arab Liver Transplantation Registry



Web-Based Hospital Registries

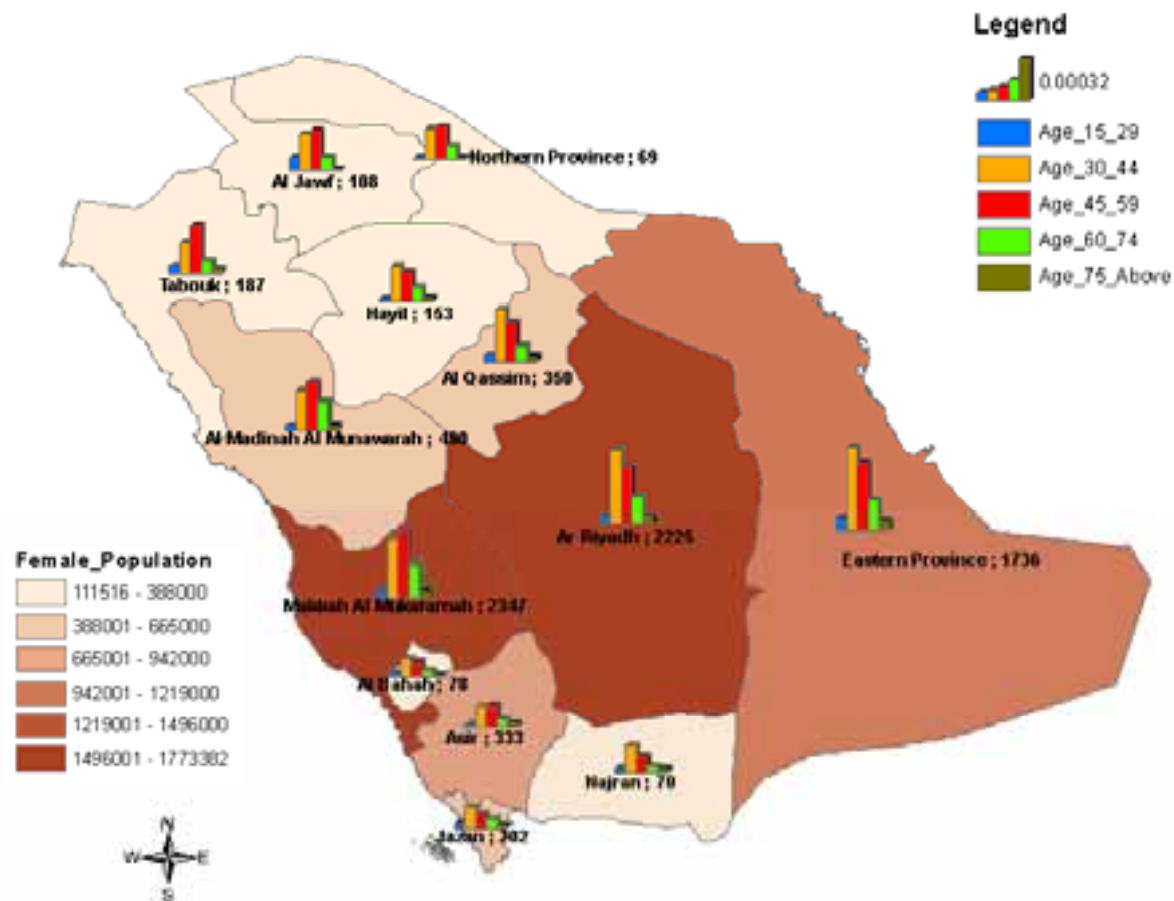
- ❖ Cleft Lip/Palate and Craniofacial Anomalies
- ❖ Thromboembolic Disorders
- ❖ Neuromuscular Diseases
- ❖ Primary Immunodeficiency
- ❖ Venous Thrombosis and Thrombophilia Disorders



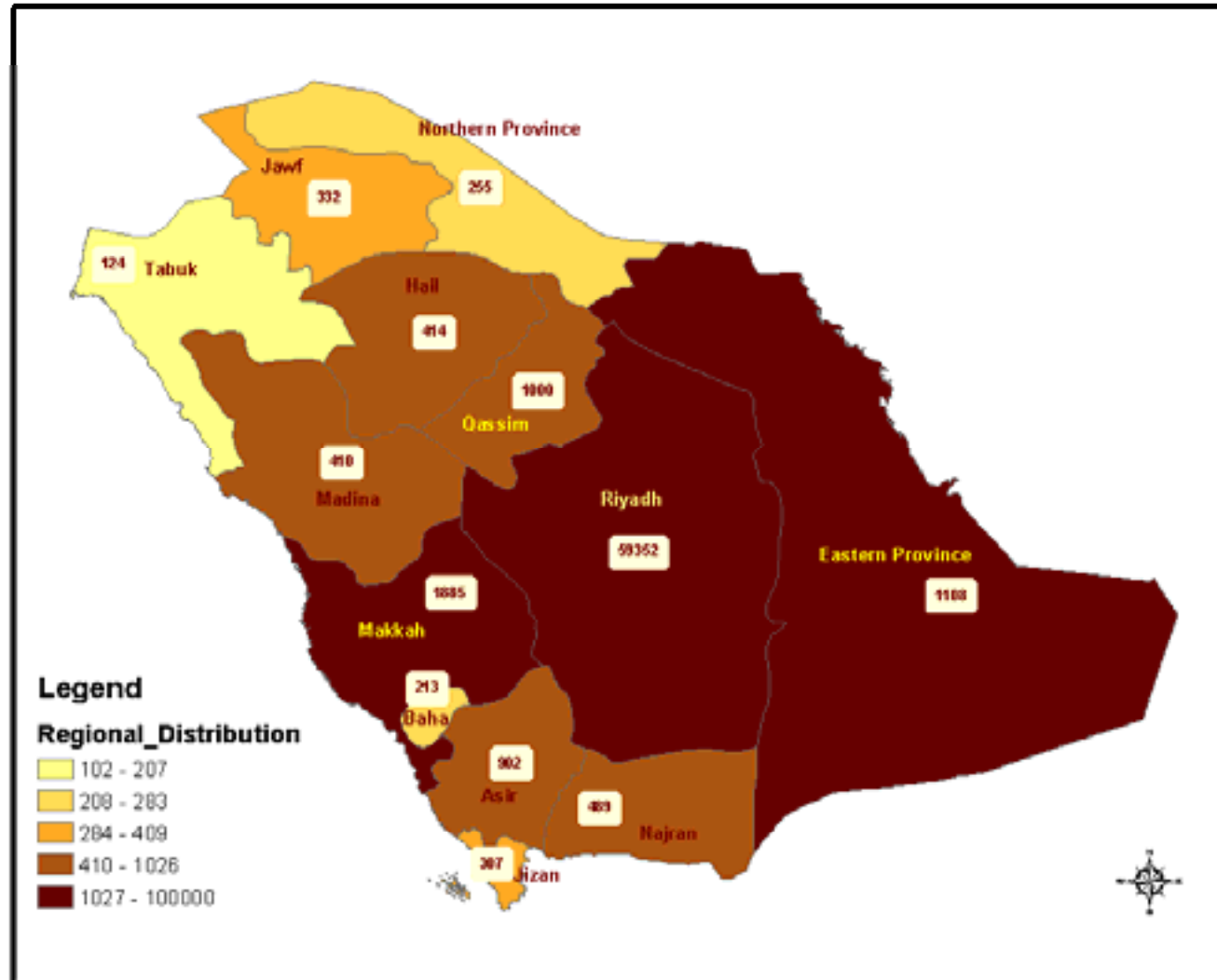


Presentation of Breast Cancer Registry Data

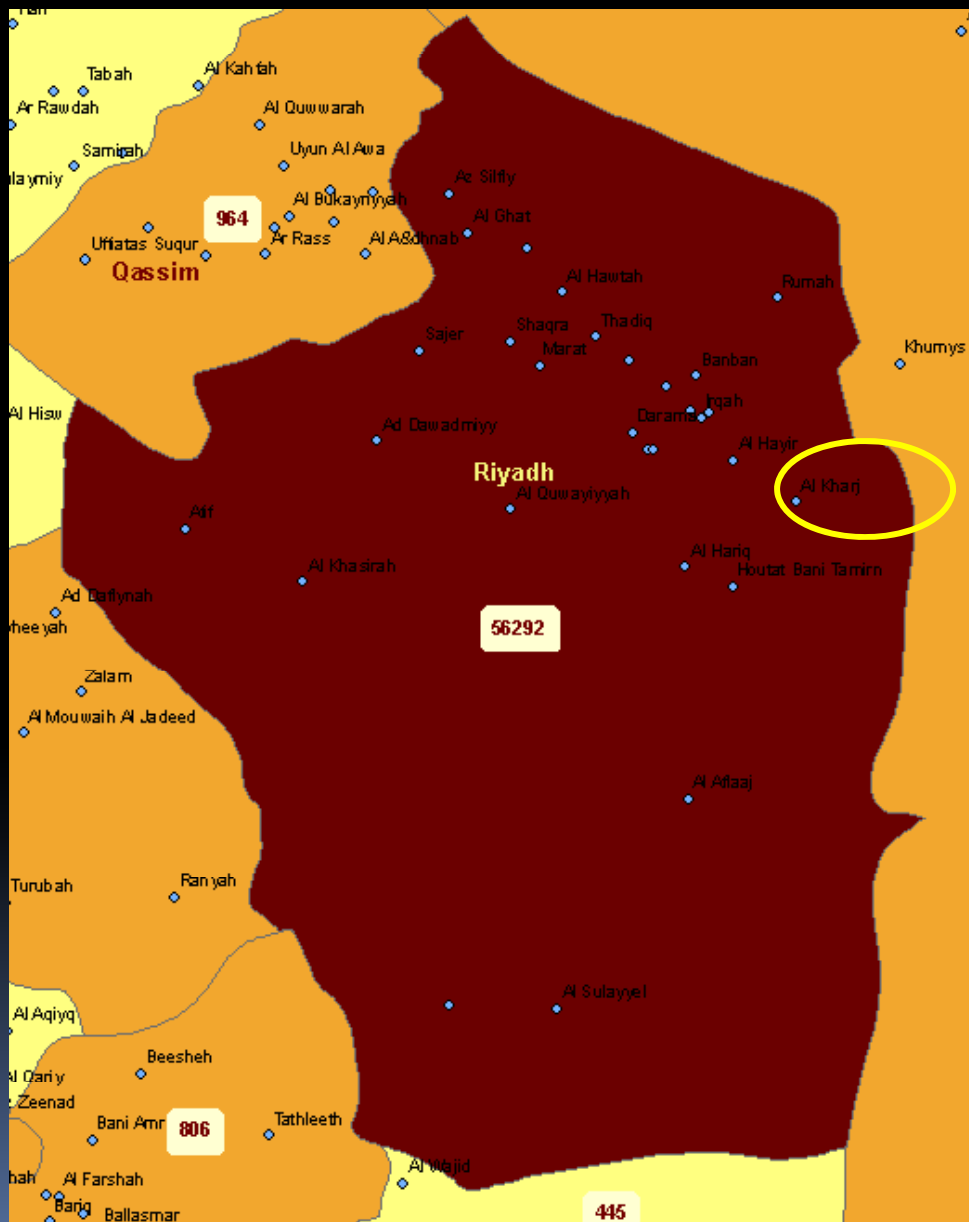
Breast Cancer Age Distribution



Distribution of Diabetic Patients



Phase I : Riyadh region with 27 participating hospitals



Identify Results

Layers: <Top-most layer>

Location: (735437 403112 2677515.695667)

| Field | Value |
|------------------|-----------|
| NID | |
| MRN | |
| First_Name | |
| Father_Name | |
| Family_Name | |
| Grandfather_Name | |
| City | 1318 |
| Sex | 1 |
| Marital_Status | 2 |
| Telephone | |
| Mobile | 999999999 |
| Email_Address | <null> |
| Initial_DType | Type II |
| English_name | Al Kharj |
| Province | Ar Riyadh |

List of all patients in Al Kharaj city

Single patient information





On-line Registration System



Merging related information in the form of databases can provide improved health care operations through instant access to data, ease of managing complex data structures, and creation of reports to be used by healthcare planners and hospital administrators.



The objectives of the diabetes registry are wide and very important for the Ministry of Health of any country. It is the only system by which the country can recognize the disease problems and plan the management of the disease control.

The registry is designed with the goal in mind to provide information on the extent and nature of specific types of diabetes, diabetes complications and treatment of diabetes in the Kingdom.

University Diabetes Centre, King Saud University

Riyadh, Saudi Arabia Phone: 478-6100, Fax: 478-6100-7537


E-mail: ksudc@ksu.edu.sa

Visit us at: www.ksu.edu.sa

The following maps require ArcReader (free download) [Click here to download](#)

- [Population w.r.t Diabetic Patients](#)
- [Age Distribution](#)
- [Type of Diabetes](#)
- [Diabetes Complications](#)
- [Diabetes Associated Diseases](#)
- [Diabetes Treatment](#)
- [Regional Diabetic Population](#)

📍 Click on a title from the list to display the map 📍

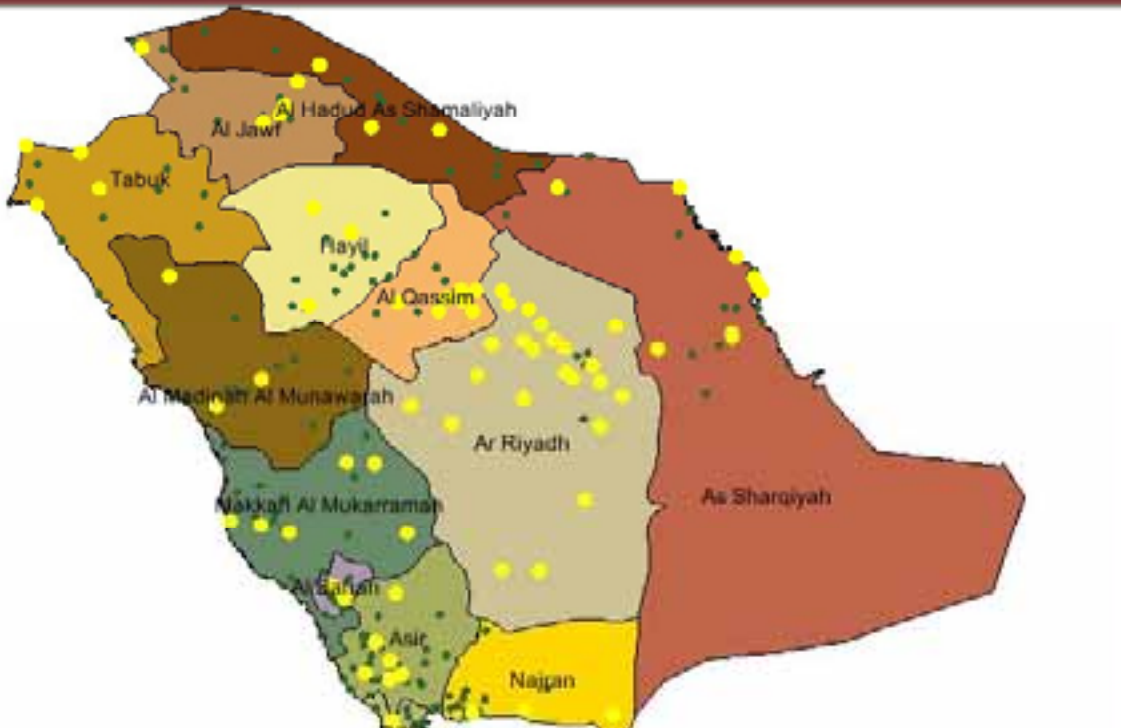
| Complication | Treatment | |
|--|-----------------------------------|------------------------------------|
| • Vasculopathy | • Diet | |
| • Nephropathy | • Regular Insulin | |
| • Neuropathy | • NPH Insulin | |
| • Retinopathy | • Mixed Insulin | |
| • HBP | Age Distribution | |
| • HLIPD | • Below 19 years | • Between 60 - 79 |
| • With medication | • Between 19 -39 | • Age 80 and above |
| • Without medication | • Between 40 -59 | |
| Misc. Maps | Type of Diabetes | |
| Diabetes Mortality | Initial | Current |
| Map Query Tool  | • Type I | • Type I |
| +ve Family History | • Type II | • Type II |
| Distribution of Females | • GDM | • GDM |



Gender All Male Female

Marital Status

Initial Type of



Gender is P.Female
 Initial Diabetes Type is II
 Marital Status is Married
 Record Status is Valid

[Define a new criteria](#)

Layers

Mobile Active

- AIRPORTS
- CITIES
- POPULATION AREA
- undefined

[Refresh Map](#)

RESULTS: Found 2 records that match your criteria.

Page: 1 of 1

[First Page](#) | [Previous Page](#) | [Next Page](#) | [Last Page](#)

| National ID Number. | MRN | Serial # | Patient Name | Gender | DOB | Age | Age (Onset) | Initial Diabetes Type | Postal Code | Tel |
|---------------------|-----|----------|--------------|--------|------------|-----|-------------|-----------------------|-------------|-----|
| | | 1004393 | | Female | 7/2/1924 | 83 | 61 | 2 | | |
| | | 1004357 | | Female | 21/11/1930 | 77 | 69 | 2 | | |



Our imagination is the only limit to what we can hope to have in the future.

~ Charles F. Kettering

Ability is of little account without opportunity

~ Napoleon

The National Center for Health Statistics (NCHS) supports research in the medical and health sciences by providing a dynamic platform for health researchers and administrators fulfilling all analysis requirements, thereby assisting in health decision making.

The screenshot displays the website for the Center for Health Statistics. At the top, the title "Center for Health Statistics" is centered in a dark blue header. Below the title, on the left, is the organization's logo, which includes a tree and Arabic text: "مركز البحوث الصحية" and "Research Center". To the right of the logo is a navigation menu with four blue buttons: "Home", "Registers", "Services", and "Contact Us". Below the navigation menu is a circular graphic divided into four colored segments labeled "Integrity", "Excellence", "Research", and "Quality".

The main content area on the right has a dark blue background. It features a small image of a computer keyboard. Below the image, the text reads: "Powered by the latest technologies, Center for Health Statistics (CHS) aims to provide a dynamic and interactive platform for the statistics of various national surveys, research programs and disease registries. The site is secured with user id and password assigned to authorized users for browsing. All data is completely secured with a complete masking of confidential information."

Below this text is the "Our Projects" section, which includes the heading "Our Projects" and the instruction "Select from the drop down list to view the projects statistics". A dropdown menu is currently set to "National Congenital Heart Defects Registry", followed by a "Submit" button.

At the bottom of the page, there are two logos: a circular logo on the left and a square logo on the right. Between them is the text: "Collaboration between Research Center, KFJHSC Riyadh and SporeTime Research Australia".

Center for Health Statistics Projects

- Saudi National Diabetes Registry
- Epilepsy Registry
- Congenital Heart Defects Registry
- Breast Cancer Registry

The screenshot displays the website for the Saudi Congenital Heart Defects Registry. The header features the logo of King Faisal Specialist Hospital & Research Center and mentions its collaboration with the University Diabetes Center, KAUH, Riyadh. The main navigation bar includes 'Reports' and 'About'. The left sidebar, titled 'Statistical Reports', lists various report types: Patient Presentation (including Patient Presentations, Line, Female, Motion Chart, and Hospital), Followup Presentation (including Visits and Profile), and Others (including Gender Distribution, Associated Congenital Anomalies, Risk Factors and Presentation Age, Patient Map, and Patient Map (%)). The main content area is titled 'Analytical reports for the Saudi Congenital Heart Defects Registry' and features a central graphic of 3D bar and pie charts. Below the graphic, it states that the registry was developed and maintained by the BEC Department at King Faisal Specialist Hospital & Research Center, Riyadh, and is used for research studies. The platform was designed by the Evidence Based Decision Support Group for the BEC Department, KFSH&RC. A 'Contact us' section provides information for queries, and a 'Related links' section describes the platform's dynamic reporting capabilities.

KING FAISAL SPECIALIST HOSPITAL & RESEARCH CENTER
in collaboration with UNIVERSITY DIABETES CENTER, KAUH, Riyadh

KING FAISAL SPECIALIST HOSPITAL & RESEARCH CENTER
Statistical Reports for Congenital Heart Defects Registry

Statistical Reports

- Patient Presentation
 - Patient Presentations
 - Patient Presentations (Line)
 - Patient Presentations (Female)
 - Motion Chart
 - Patient Presentation / Hospital
- Followup Presentation
 - Follow-Up Visits
 - Patient Follow-Up Profile
- Others
 - Gender Distribution
 - Associated Congenital Anomalies
 - Risk Factors and Presentation Age
 - Patient Map
 - Patient Map (%)

Analytical reports for the Saudi Congenital Heart Defects Registry

The Saudi Congenital Heart Defects registry has been developed and maintained by the BEC Department at King Faisal Specialist Hospital & Research Center, Riyadh.
This platform projects the live registry data on a statistical platform, which will be used by the researchers for various studies.

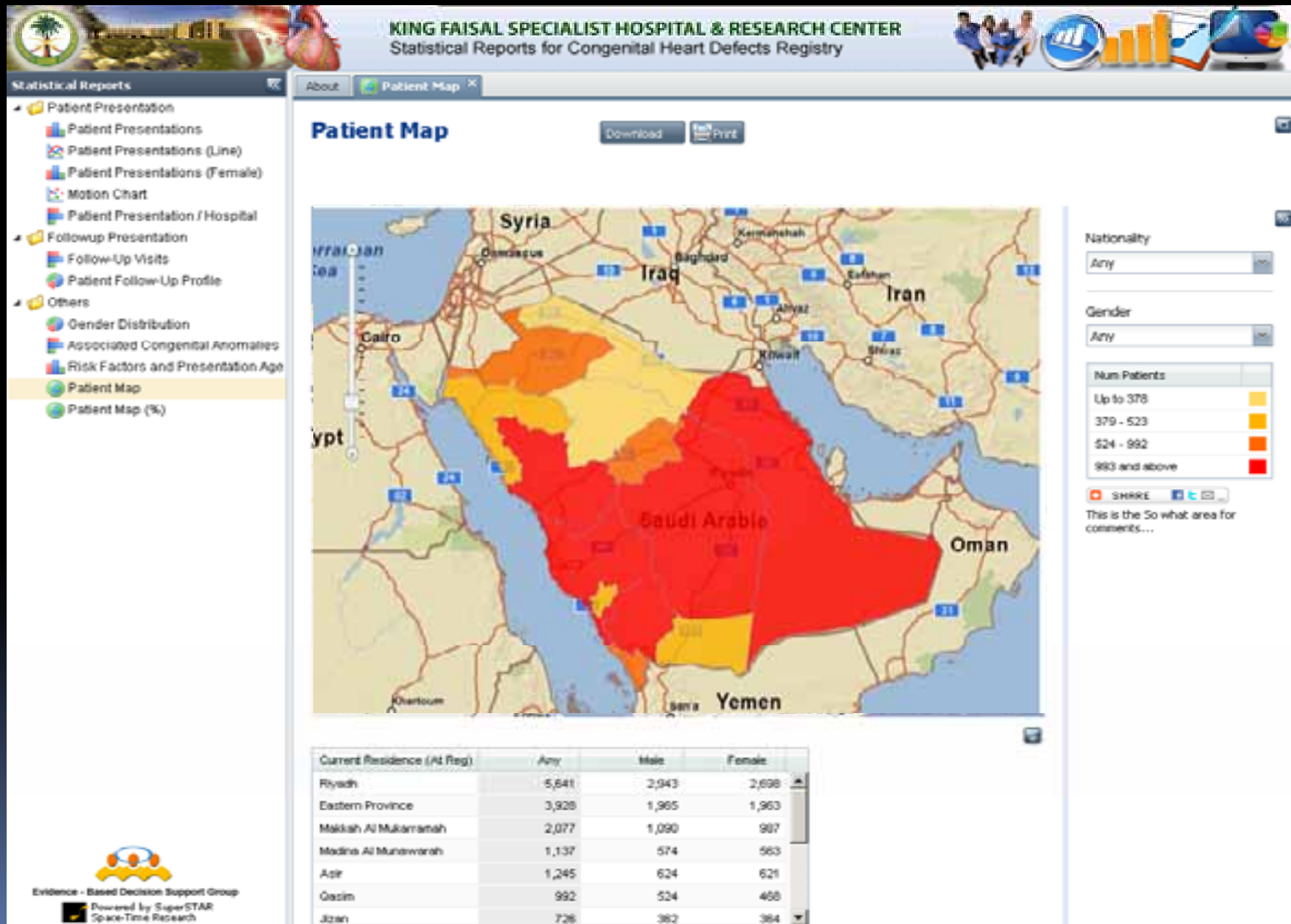
Platform designed by Evidence Based Decision Support Group for the BEC Department, KFSH&RC

Helping to make Informed Decisions...

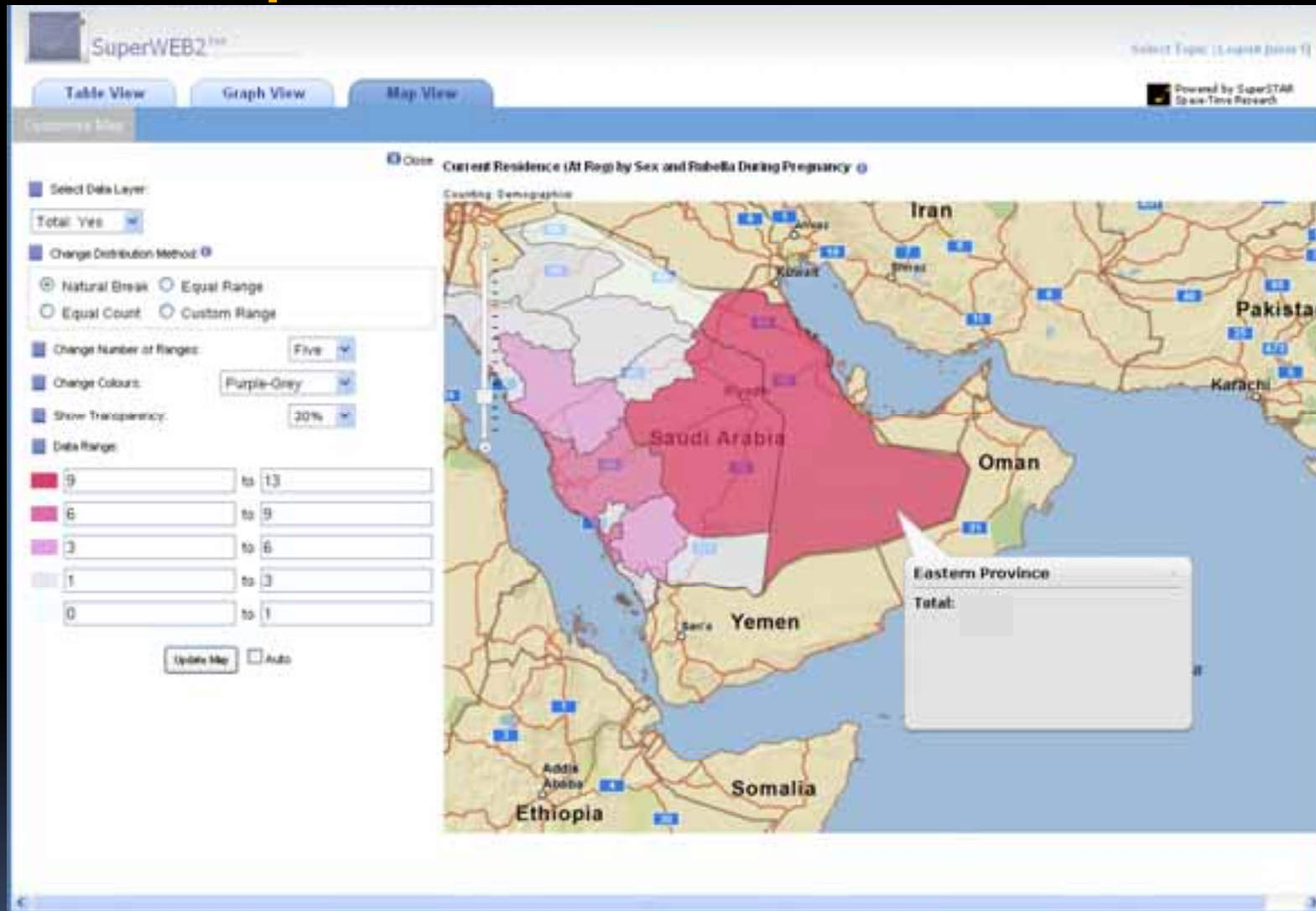
Contact us
For any queries you may have; please get in touch with the Evidence Based Decision Support Group at the Biostatistics, Epidemiology & Scientific Computing Department.

Related links
This platform is designed to show dynamic results in various formats/cross-tabulations for analysis and quick decision making. This platform provides all the necessary data cross tabulations / Analytical reports supporting all kinds of Research Databases.

Congenital Heart Defects Registry - SuperVIEW



SuperWEB – for Researchers



Web 2.0 technologies including ESRI RESTful Web Services technology

ESRI Technology Integration

ArcGIS Server 9.3.1

- Store the regional boundaries
- Produce the thematic maps dynamically based on data selection; using an equal interval calculation
- Overlay the thematic map

ESRI Web Services technology

- Mash-up the thematic map with a Google base map
- RESTful web services
- ArcGISonline

Conclusion

GIS in Health Care Helps in

- ✓ Determining where and when to intervene.
- ✓ Improving the quality of care.
- ✓ Increasing accessibility of service.
- ✓ Finding more cost-effective delivery modes.
- ✓ Preserving patient confidentiality while satisfying the needs of the research community for data accessibility.

Thank you