

مَنْ قَتَلَ نَفْسًا بِغَيْرِ نَفْسٍ أَوْ فَسَادٍ فِي الْأَرْضِ فَكَأَنَّمَا قَتَلَ النَّاسَ جَمِيعًا وَمَنْ أَحْيَاهَا فَكَأَنَّمَا أَحْيَا النَّاسَ جَمِيعًا

126-77

إِيَّاكَ وَالدِّمَاءَ وَسَفْكَهَا بِغَيْرِ حِلِّهَا

بیر هیز از خونها و خونریزیهای بناحق ...چون در روز حساب به داوری در میان مردم پر دازد، نخستین داوری او در باره خونهایی است که مردم از یکدیگر ریخته اند. پس مباد که حکومت خود را با ریختن خون حرام تقویت کنی، زیرا ریختن چنان خونی نه تنها حکومت را ناتوان و سست سازد، بلکه آن را از میان برمی دارد یا به دیگران می سپارد

ترجمه و شرح نامه ۵۳ نهج البلاغه (عهدنامه مالک اشتر)؛ بخش بیست و پنجم: حرمت خون انسانها

Iranian Pediatric Thrombosis Registry (IPTR)

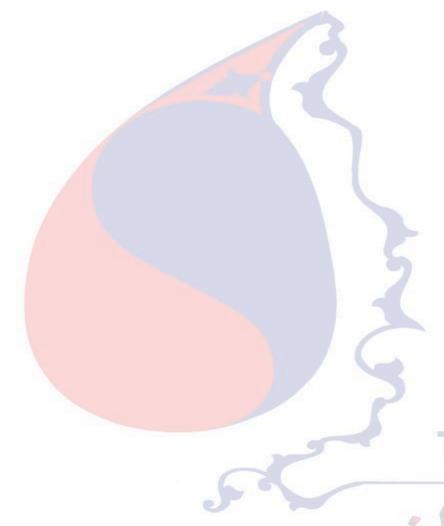
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12-08-1401



Why registry

IRSTH

Iranian Society of Thrombosis and Hemostasis

انجمن ترومبوز هموستاز ايران

Table 1 Prevalence of patients with leprosy resident in their homes in Norway 1856, 1860 and 1865 with subsequent 5-year incidence by region

Region	Prevalent cases		Subsequent incident cases			
	Year	n ₁	Period	n ₂	Annual % of initial cases (i.e. 1856)	Annual % of immediate previous prevalent cases
North Norway and Trøndelag	1856	722	1856-60	348	9.6	9.6
	1860	700	1861-65	349	9.7	10.0
	1865	559	1866-70	290	0.8	10.3
Sunnfjord	1856	433	1856-60	209	9.7	9.7
	1860	305	1861-65	153	7.1	10.0
	1865	246	1866-70	112	5.1	9.1
All other regions	1856	1473	1856-60	574	7.8	7.8
	1860	1203	1861-65	496	6.7	8.2
	1865	1060	1866-70	395	5.4	7.5
Total	1856	2628	1856-60	1131	8.6	8.6
	1860	2208	1861-65	998	7.6	9.0
	1865	1865	1866-70	797	6.1	8.5

Source: Adapted from G. Armauer Hansen. Spedalskhedens Årsager. Christiania 1874 (p. 70).



Acta Neurol Scand 2012: 126 (Suppl. 195): 4-6 DOI: 10.1111/ane.12021

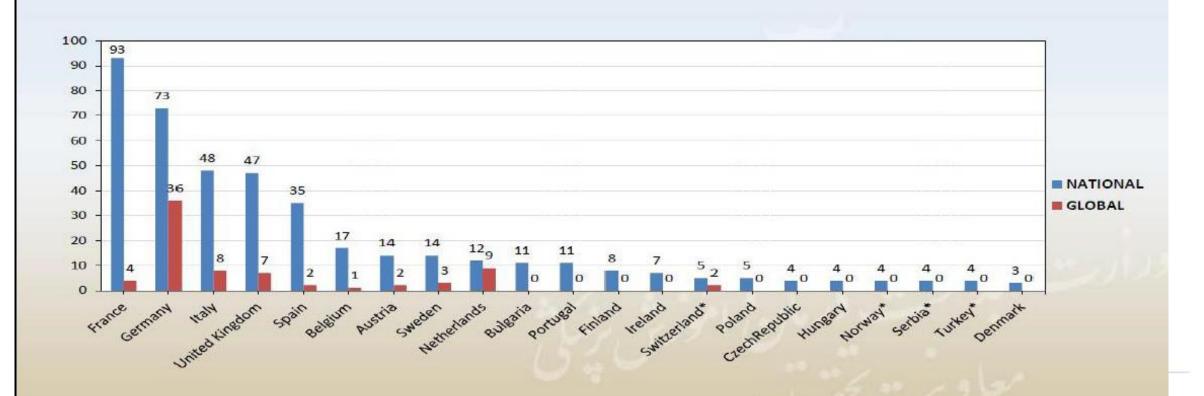
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ACTA NEUROLOGICA
SCANDINAVICA

The origin of registry-based medical research and care



نمودار فراوانی تعداد برنامه های ثبت بیماری های نادر در کشورهای اروپایی



Definition of a Disease Registry

- A disease registry is a database that contains information about people diagnosed with specific types of diseases.
- The registry collects information that can be used for :
 - capturing, managing, and organizing specific information for a population of patients.
 - providing a systematic and comprehensive care
- Disease registries are either clinical-based or population-based.

A clinical-based disease registry

- Contains Data on patients with a specific type of disease , diagnosed and treated at a practice
- Allows care team members to proactively manage patients with chronic diseases.

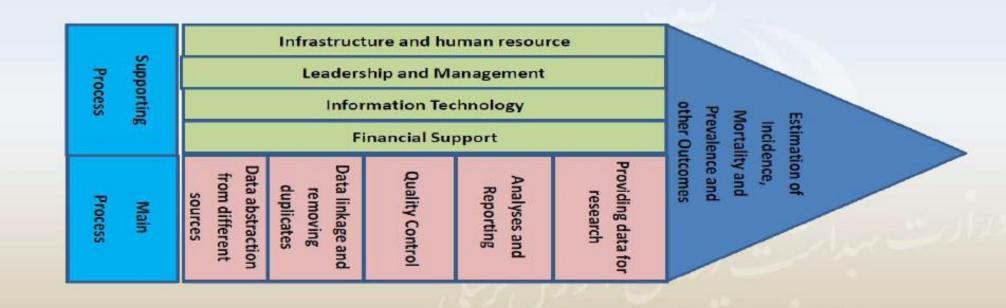
A population-based disease registry :

- Contains and Tracks
 Records for people :
 - Diagnosed with a specific type of disease
 - Reside within a defined geographic region (i.e., a community, city, or statewide).

Benefits of a Registry

- A powerful tool that can drive significant practice change and improve the health of the patients being served
- Enable the provider to ensure that all their patients are getting proper care
- Track the progress of high-risk patients
- Identify the need for follow-up services
- Empower patients to take an active role in their treatment
- Coordinate care and identify gaps
- Increase public awareness to prevent chronic diseases
- Incorporate consensus guidelines for disease and support studies & evidence-based care

Registry is a system



First-class quality registry fulfill six requirements

Strong core team

- One team responsible
 - Clear process leadership
 - Personal dedication
 - Sense of ownership
- Strong support from specialists
 - Data collection is team effort
- Entrepreneurial "can-do" spirit
 - creating winners

Systematic feedback

- Fast feedback of results
 - To allow comparisons over time for own results
- Learnings linked to feedback
 - Learn from others
 - Workshops and seminars
 - Organized best-practice sharing

Committed specialists

- Atmosphere of cooperation
 - Evidence-based discussion
 - Mutual respect and team spirit
 - Peer pressure in joint efforts
- Evidence-based approach
 - Strong foundation in research
 - Willingness to measure

Easy-to-use

- Easy to enter data
 - Only collect what is needed
 - Easy-to-use IT interface
 - Move towards integration with EMR systems
- Easy to receive feedback
 - Fast feedback of own results
 - Decision-support tools

Valid & reliable metrics

- Strong foundation in research
 - Internationally tested metrics
 - Proven causality
 - Possible to benchmark
- In touch with clinical practice
 - Practicality filter
- Risk adjustment possibilities
 - Collect relevant patient data

Stable financing

- Access to stable financing
 - Backing from institutions
 - Clearly delineated budget for registry admin, maintenance
- Arms-length relationships with private financiers
 - Access to funding without compromising data integrity

Source: BCG analysis

Selection bias

- Site selection (i.e. if sites with a non-representative population are preferably included),
- Patient enrolment (i.e. if not all patients are enrolled or patients enrolled are not representative of the patient population)
- Patient loss to follow-up.
- Influenced by many factors, including clinical, demographic and socioeconomic factors.

Thrombosis and Hemostasis

Key points and steps

- To clearly define the purpose of the registry
- To translate the corresponding target population. definition
 : WHO,WHEN,WHERE,HOW to be enrolled
- To establish processes allowing for enrolment of ALL eligible patients:

Prospective or RELIABLE Retrospective

- To create a system that best minimizes loss to follow-up
- Consider potential confounders and effect modifiers



- Pediatric thrombosis is not only a rare, but also a heterogeneous disease with regard to Incidences, age, sex, risk factors, location, diagnosis, treatment, comorbidity, and outcome.
- High-quality evidence for the management of most types of pediatric TE is not available search in children: focus on lysosomal storage disorders. Paediatr on scarce and low-level pedia Drugs. 2011;13:33-47. om adult

guidelines. (ASH 20 Lacasse Y, Krishnan JA, Maltais F, Ekstrom M. Patient registries for Performing RC home oxygen research and evaluation. Int J Chron Obstruct Pulmon ery challenging.

• Many disease registries, by gathering timical data, mave shown to be invaluable sources of information in larger, more heterogeneous populations, especially in rare diseases

Medicines Ager regulation

Lopez-Beret P, Orgaz A, Fontcuberta J, et al. Low molecular weight • Even regulatory heparin versus oral anticoagulants in the long-term treatment of deep venous thrombosis. J Vasc Surg. 2001;33:77-90. https://www.fda.gov/about-fda/innovation-fda/fda-facts-postm arket-patient-registry-ensures-access-safe-and-effective-devices. Accessed January 19, 2021.

opean cation

A Historical Perspective

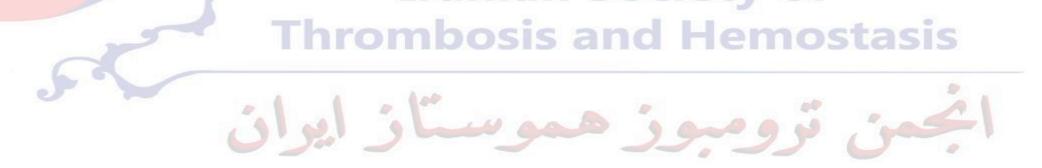
- The first reported case of inherited thrombophilia described a Norwegian family (Egeberg Thromb Diath Haemorrh 1965; 13: 516–530.)
- In the pediatric literature, the scarce information on TEs was generally represented by case reports or by autopsy-based manuscripts with limited value till 1968
- From 1968 to 1971, an all-Scottish pediatric inpatient hospital database started to collect data, then after national and/or international databases started to define the characteristics of thrombosis in children
 - Jones DR, Macintyre IM: Venous thromboembolism in infancy and childhood. Arch Dis Child 1975; 50: 153–155.
- In the early 1990s, Dr. Andrew started the first surveillance program across Canada: "the Canadian Childhood Thrombophilia Registry"
 - Andrew M, et al. VTE in children: first analyses of the Canadian Registry of VTE. Blood. 1994;83:1251-1257.
 - Monagle P, et al: Outcome of pediatric thromboembolic disease: Pediatr Res 763-766:47; 2000

Pediatric VTE:

- The incidence of VTE in children was reported to be between **0.07 and 0.14** case per **10,000** children, and more recently **58 cases per 10,000 hospital** admissions on a bimodal pattern with a peak occurring in infants <1 year and adolescence Andrew M, et al. VTE in children: first analyses of the Canadian Registry of VTE. *Blood*. 1994;83:1251-1257
- 70% increment of pediatric VTE in hospitalized patients during a 6-year period in the United States from 2001 to 2007: **1 in 200 children** admitted to a complex pediatric health care facility develop a VTE (Raffini L. et al., Pediatrics 2009; 124: 1001–1008.)
- In contrast to VTE in adults, idiopathic VTE is rare, and 95% of VTEs in children are associated with predisposing risk factors: including CVCs (the single most important risk factor), cardiovascular disease, nephrotic syndrome, surgery, infection, malignancy, and anatomic anomalies.
- Direct thrombosis-related mortality in children depending on the type of predisposing factor AND the location of the vessel occlusion may be as high as 7–9%
- Morbidity was also substantial with 8% having recurrent thrombosis, and 12% having postthrombotic syndrome
- The initial cost estimates related to **VTE alone** in children in the US, likely an underestimation, are in the order of **USD 90 million per year**

• ATE:

- Arterial ischemic stroke (AIS) occurs in both neonates and children with an estimated incidence between 1 per 1600 to 5000 live births, and about 1.2 to 7.9 per 100,000 children per year, respectively.
- Pediatric AIS in North America: (Agrawal N. et al., Stroke 2009; 40: 3415–3421 Golomb MR., et al., Stroke 2009; 40: 52–57.)
 - The incidence has been estimated as 2.4/100,000/year
 - Neonates comprise 25% of pediatric patients with AIS
 - AIS is one of the top ten causes of death in the pediatric population



Some knowledge gaps in pediatric thrombosis

ASH 2018 guideline for treatment of pediatric venous thromboembolism

Natural history & Diagnosis of:

- (A)Symptomatic catheter-related VTE, renal VTE, and (a)symptomatic SVT in neonates
- Asymptomatic VTE, (catheter-related) superficial VTE, large DVT and submassive and massive PE, (A)Symptomatic SVT, and right atrial thrombosis in children
- Catheter-related ATE in infants and young children
- Radiological screening for asymptomatic catheter-related VTE and ATE?

Some knowledge gaps in pediatric thrombosis

ASH 2018 guideline for treatment of pediatric venous thromboembolism

Treatment(1):

- What are the benefits of anticoagulation versus no anticoagulation in: neonates and children with asymptomatic VTE, portal vein thrombosis, and SVT; in neonates with renal VTE; and in children with (catheter-related) superficial VTE?
- When is thrombolysis or thrombectomy indicated in: neonates and children with right atrial thrombosis and SVT; and in children with large DVT, submassive and massive PE?
- What is the risk/benefit and the minimal infrastructure, experience, and annual case load needed of: catheter-directed thrombolysis compared to systemic thrombolysis in treatment of VTE?
- What is the optimal timing of catheter removal in: children with catheter-related VTE?

Some knowledge gaps in pediatric thrombosis Treatment(2):

- When and in which subgroups of patients is antithrombin replacement therapy appropriate in addition to heparin in the treatment of thrombosis?
- What is the optimal duration of anticoagulation in (catheter-related) superficial VTE, if needed, in SVT, and in unprovoked VTE in children?
- What is the impact of various risk factors to the optimal duration of anticoagulation in VTE?
- What is the mortality, recurrence risk, major bleeding risk, and quality of life outcomes for various treatment duration in children with unprovoked VTE?
- Which biomarkers or other factors can be used to predict recurrence in children with unprovoked VTE?
- What is the optimal intensity, duration, and modality of antithrombotic treatment for pediatric patients with **catheter-related ATE**?

Some knowledge gaps in pediatric thrombosis

ASH 2018 guideline for treatment of pediatric venous thromboembolism

Outcome

- What are the risk factors for poor acute and long-term outcome of catheter-related ATE?
- What is the impact of vitamin K antagonists versus low-molecular weight heparin on bone density for long-term treatment?
- What is the effect of direct oral anticoagulants on menstrual bleeding in teenagers?

DOI: 10.1111/jth.15260

RECOMMENDATIONS AND GUIDELINES

 the ISTH SSC SSC subcon and Hemost hemostasis Network (IP C. Heleen van Om

The aims of

(1) Developr prospective

(2) Establish effectively co

At this mom

 By January 2 THROM-PEC

the ISTH SSC
 International pediatric thrombosis network to advance pediatric thrombosis research: Communication from the ISTH SSC subcommittee on pediatric and neonatal thrombosis and hemostasis

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I Thrombosis hrombosis

national

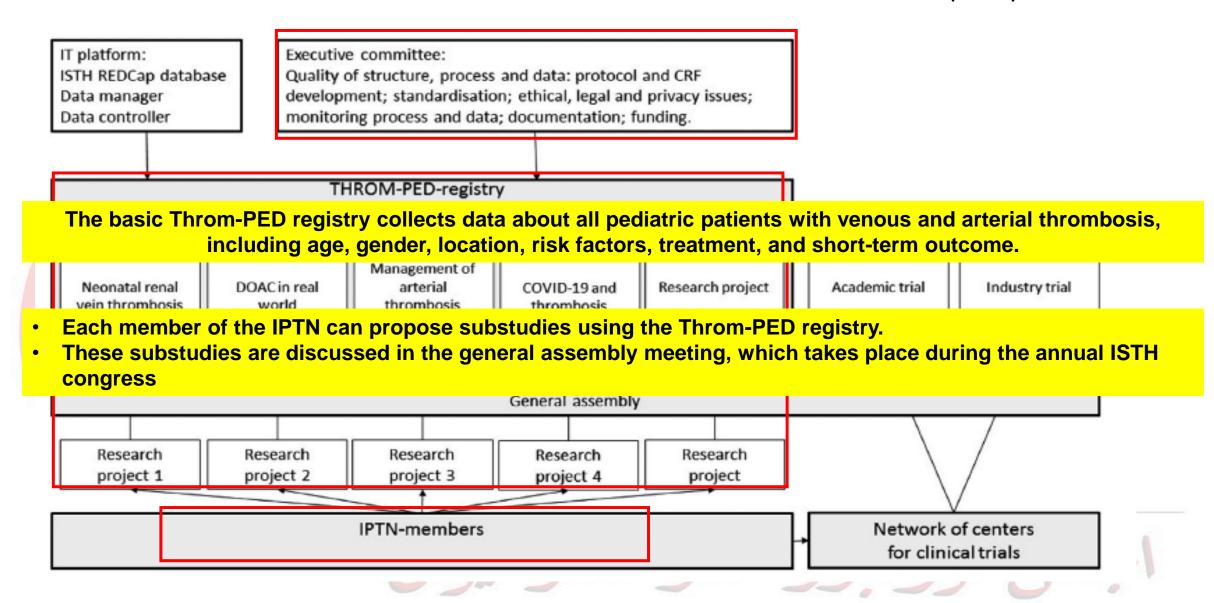
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Current structure of the International Pediatric Thrombosis Network (IPTN)



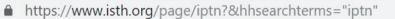
THROM-PED REG ISTRY:

Systemica and Prospective collecting patient data

- Understanding the natural history of certain types of pediatric TE
- Identifying risk factors and groups at high risk for TE
- Understanding diagnostic methods
- Monitoring clinical effectiveness, safety, and cost effectiveness of anticoagulant drugs in all types of TE
- New drug trials
- Patient-reported outcomes AND quality of life assessments
- To evaluate long-term clinical outcomes















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INTERNATIONAL PEDIATRIC THROMBOSIS NETWORK





studies Large nediatric DOAC trials are under way, but many importa

The International Pediatric Thrombosis Network is a group of pediatric thrombosis experts whose **ultimate** goal is to bring the best treatment to children with thrombosis.

Although thromboembolic events are increasingly recognized in children, the incidence remains relatively rare. Current guidelines for clinical care are based on low evidence and mainly extrapolated from adult

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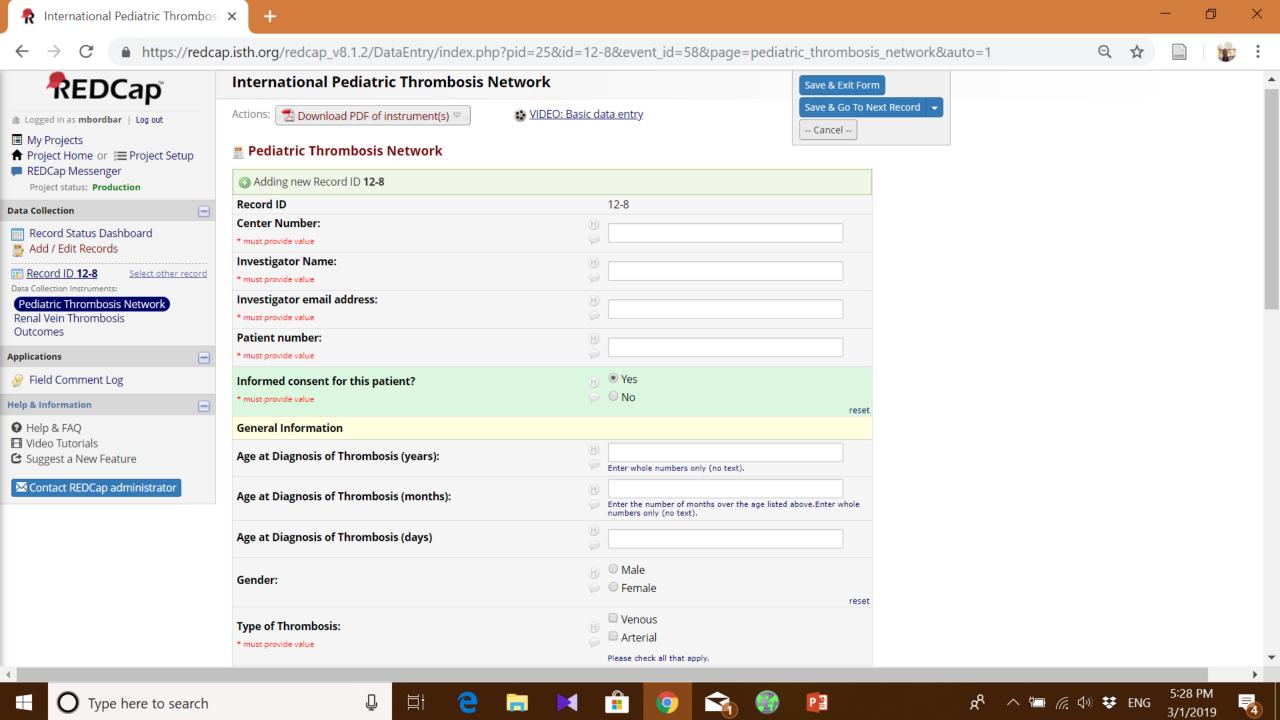
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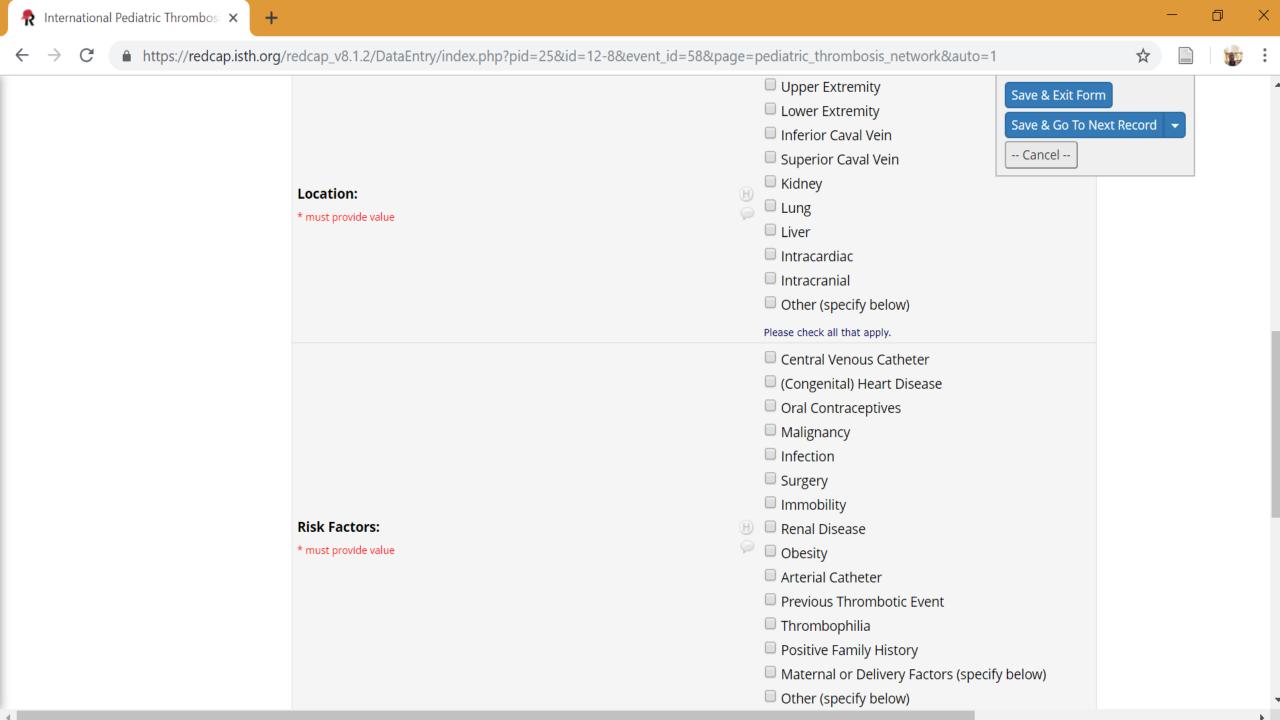
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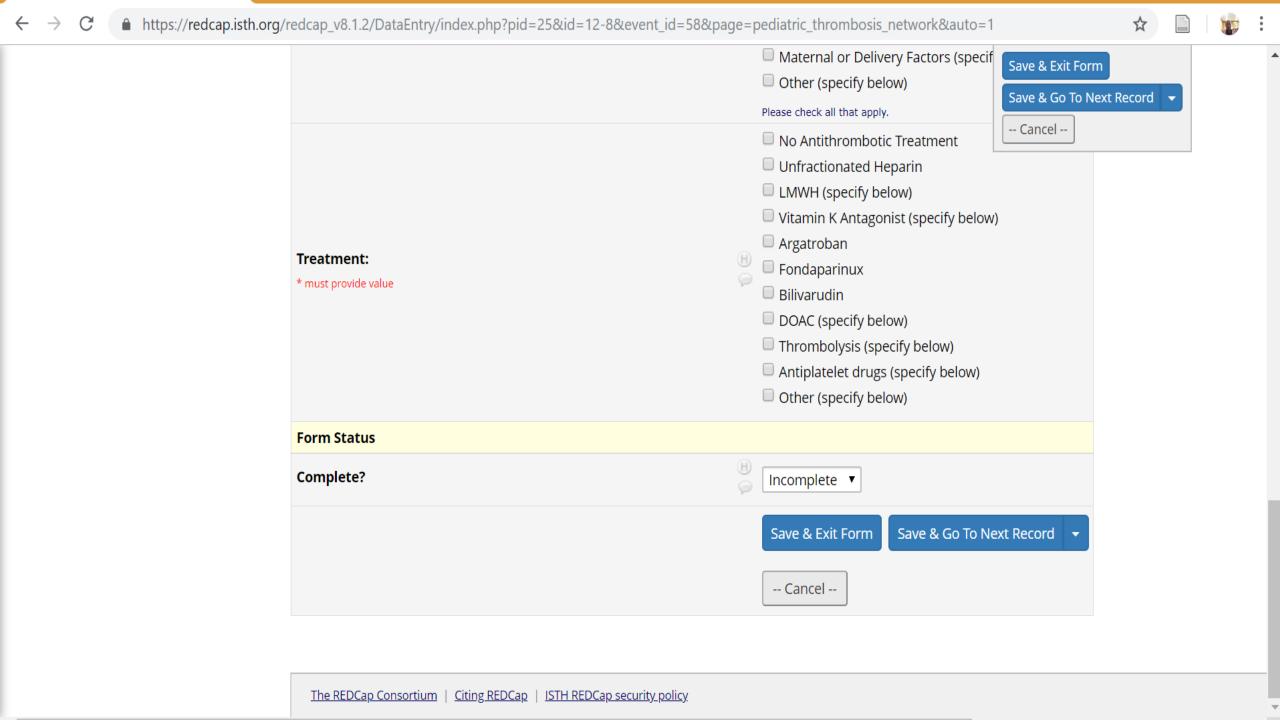
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International registry

- Better study design and scientific analysis
- More opportunity for development and to upgrade our system
- Stricter compliance with GCP
- More scientific credibility
- Fewer scientific defects such as selection bias, etc
- More supervision on potential confounders and effect modifiers
- More chance to be published

National registry

- More patients and cases independently
- More chance for representing our sites and potentials
- More chance for our submitted studies to be approved
- An opportunity to learn HOW
 CAN WE WORK TOGETHER
- An opportunity for an attempt to establish a national network and regional leadership

Iranian Pediatric Thrombosis Registry (IPTR)

- Modelling from –bot not the same as-IPTN to be able to synchronized with them if needed.
- National data base :Off line data transport
- **Data collection site**: IRSTH and/or one of the research centers in IRAN .(MOFID(2); Shiraz; ...) provides financial, technical and human resources support for a network of centers, sites, offices and clinics, etc.
- Based on a cooperation agreement between the research centers and the resource provider association (IRSTH), the ownership of information is defined and an Executive Committee (EC) is formed.
- Each center, site, physician or investigator own their own information.
- In order to use the collected information from all over the country for studies, the study proposal must be submitted to EC and the research center introduced by the researcher.
- The principal investigator of the study undertakes to involve all of the centers to as partners
 of the study in the final result.
- ICF should be taken from the patients and parents /legal guardians

اطلاعات الزامي و شرطي

- الله عنام و نام خانو ادگی , نام پدر , کد ملی , تاریخ تولد , جنسیت , قومیت, آدرس و تلفن همراه و ثابت تماس , شماره پرونده بیمار ستانی
 - ٢) نام مركز مراجعه و ثبت اطلاعات:
 - ٢) نام و مشخصاتِ پزشک/محقق مسئولِ بيمار:
 - الميل منام و نام خانوادگي , رشته و تخصص , تلفن ثابت و همراه , ايميل
 - ۴) سن تشخیص بیماری: (ماه/سال)
 - ۵) نوع ترومبوز: وریدی ؛ شریانی (* تنها پس از قطعی شدن نوع ترومبوز ثبت صورت میگیرد)
 - ۶) محل ترومبوز + ع<mark>لام</mark>ت منجر به تشخیص : ۱۶ گزینه محل ترومبوز بهمراه علائم و <mark>نشانه های</mark> تشخیصی مرتبط)
 - ۷) ریسک فاکتورهای در شرح حال و سوابق بیمار*
 - ۱ اقدامات درمانی Iranian Society) اقدامات
 - ❖داروهای ضد پلاکتی +نام/آنتی کو اگو لانت های مصرفی+نام/ترومبولیتیک سیستمیک/لوکال +نام/ترومبکتومی /هیچکدام
 - ۹) سیر بیماری:
 - بهبود کامل/بهبود نسبی/تحت نظر و در حال در مان/عود ترومبوز /مرگ / عدم پیگیری و نامشخص

ریسک فاکتورهای ترومبوز در شرح حال شخصی و خانوادگی

- ۴۱. حادثه ترومبوتیک ثابت شده: اگر بلی آنگاه بنوع (شریانی/وریدی) و محل
- ۵۱. ترومبوفیلی ارثی یا اکتسابی ثابت شده: اگر بلی آنگاه انتخاب گزینه:
- PC; PS; AT; F2G20220; APCR/FVLeiden; Homocysteinemia; high FVIII
- > APLA syndrome; high Lp(a)
- > OTHER

- ۴۱. مصرف OCP
- ۵۱ آنمی های ارثی: 🖵
- 🔾 سندروم های داسی شکل
 - تالاسمی اینترمدیا
 - ﴿ تَالاً سَمَّى مَارُّور
- ﴿ سایر همو گلوبینوپاتی ها و بیماری های هماتولوژی(نام ببرید)
 - ۶۱. بیماری اتوایمون یا روماتیسمی ثابت شده
 - ٧١. فشار خون بالا
 - ۸۱. دیابت / بیماری متابولیک

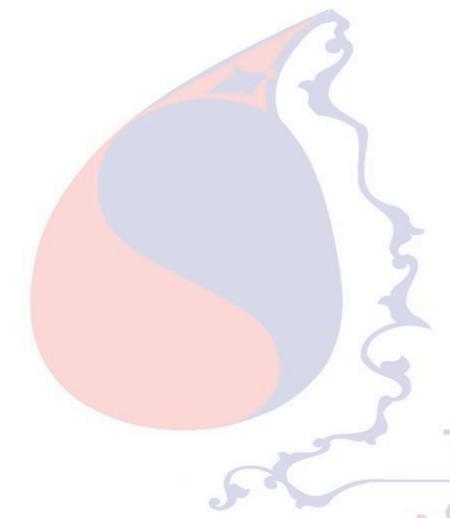
- ا. سابقه خانو ادگی ترو مبوز: سابقه سکته قلبی در سابقه سکته مغزی در سنین زیر ۵۰ سال /سابقه سکته قلبی در سنین زیر ۵۰ سال/سابقه سقط های مکرر/سابقه ترومبوز تابت شده اندام, آمبولی ریوی و... /سابقه هیپر کلسترولمی
 - ۲. کاتتر ورید مرکزی
 - ٣. كاتتر شرياني/نافي
 - ۴. بیماری قلبی مادرزادی/دریچه ای
 - ه. انواع بدخیمی: 🥊 انتخاب گزینه ها
 - '. عفونت شدید منجر به بستری
 - ۷. دهیدر اتاسیون شدید /متوسط
 - بیحرکتی کامل : پخد روز ایمان
 - ۹. تروما منجر به کوفت^نگی, کشیدگی, در رفتگی شکستگی, و..
 - ۰۱. چاقی: اگر بلی آنگاه BMI
 - ۱۱. بستری در ۱۲
 - ۲۱. بیماری کلیوی ثابت شده
 - ۳۱. بیماری کبدی ثابت شده

اطلاعات انتخابی و ترجیحی

- ۱) تصویر برداری های منجر به تشخیص (۱۰ گزینه):
- DUS; CT; CTV; CTA; CTPA; MRI; MRV; MRA; ECHO; OTHER
 - ۱) آزمایشات پاراکلینیک تشخیصی/ پانل ترومبوفیلی ارثی و اکتسابی
 - ۲) طول دوره درمان تجویز شده برای بیمار در زمان ثبت : کمتراز ۶ هفته ۶ هفته ۴ هفته ۴ هفته ۴ هفته ۴ هفته ۴ هفته ۴ هفته ۲ هفته ۲ هفته ۲ هفته ۴ هفته ۲ هفته ۲ ماه / بیش از ۶ ماه / ماه / بیش از ۶ ماه /مادام العمر / نامشخص
 - ۳) عوارض درمان ثبت شده
 - ۴) پیگیری تا زمان ثبت : طول مدت پیگیری ؛ تعداد دفعات مراجعه

Thrombosis and Hemostasis

انجس ترومبوز هموستاز ايران



سپاس از توجه شما پرسش و پاسخ

IRSTH

Iranian Society of Thrombosis and Hemostasis

انجمن ترومبوز هموستاز ايران