

Methods: We conducted a retrospective cohort study including all children aged less than 15 years old, treated at the Pediatric Hemato-Oncology unit-Rabat. Data were collected from the medical records. Parents were contacted or death register consulted to ascertain whether the child was still alive. Kaplan Meier's method was used to calculate Overall Survival (OS), the log-rank test was used for the comparison of survival between the categories.

Results: Overall, 803 cases were collected. The male/female ratio was 1.2 and median age at diagnosis was 4.5 years; 89.5% had microscopic confirmation. Hematological malignancies were 45.1% of cases (leukemia 30.6%, lymphoma 13.3%); 65.8% of the leukemias were acute lymphoblastic leukemia (ALL) and 54.7% of the lymphomas were non-Hodgkin's. Solid tumors were 54.8%, (Central Nervous System 11%, Renal 10.3% and Sympathetic Nervous System 9.3%). During the follow-up period, 291 patients died. The OS rate of all cancers was 79%, 65.2%, and 63%, respectively at 1,3 and 5 years. Survival ALL had a better (66%) 5-year survival rate compared to other leukemias ($p < 0.001$). OS was 84% for nephroblastoma, 81% for Hodgkin's disease, 78.3% for retinoblastoma, 67.7% for glioma, 65.2% for osteosarcoma, 46% for sarcoma d'Ewing and 36.7% for neuroblastoma.

Conclusion: These results constitute a paramount indication for implementing a project to improve the prognosis of childhood cancer in Morocco.

A06/II - CLINICOPATHOLOGICAL, THERAPEUTIC AND PROGNOSTIC FEATURES OF THE TRIPLE-NEGATIVE BREAST CANCER IN MOROCCO (NATIONAL INSTITUTE OF ONCOLOGY 2011-2015)

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Background: Triple-negative breast cancer (TNBC) is an aggressive group of breast carcinomas negative for estrogen receptor (ER), progesterone receptor (PR) and no histochemical expression of human epidermal receptor -2. The aim of this study is to determine the epidemiological, clinicopathological, histological and prognostic features associated to TNBC in Moroccan patients.

Methods: This is a retrospective study of confirmed TNBC collected from all types of female breast cancer recruited at the National Institute of Oncology (Morocco), between January 2011 and December 2015. Clinicopathological, histological, therapeutic and prognostic features have been analyzed. Disease-Free-Survival (DFS) and Overall-Survival (OS) have been estimated by Kaplan-Meier analysis. The comparison of survival between different modalities of each variable was made by the Log-Rank test and the identification of prognostic factors by the Cox model.

Results: A total of 447 from 4389 patients presenting breast cancer, were identified as having triple-negative breast cancer (10.2%) with an average age of $47, 9 \pm 11$, 3 years. The majority of TNBC (94%) were classed invasive ductal carcinoma and 60% of TNBC's were locally advanced or at metastatic stage. The OS and DFS rate were respectively 64.1% and 65.5%, at 5 years. Multivariate analysis concluded that age, margin of surgical resection, histological type, and TNM classification were prognostic factors.

Conclusion: Results about TNBC's characteristics in Moroccan patients are in accordance with literature data. The overall survival of TNBC remains low, hence the interest of early diagnosis and management to improve prognosis.

Keywords: Triple negative breast cancer, Epidemiological Profile, prognostic factors, Survival

A07/II - DETECTING AND PROFILING EXTRACELLULAR MIRNAS AMONG SOME WILMS TUMOR MOROCCAN PATIENTS USING MOLECULAR BIOLOGY TOOLS

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Nephroblastoma or Wilms Tumor (WT) results from the abnormal kidney development at embryonic stage. WT is the most common childhood renal malignancy (95 %) that affects approximately 1/10000 children. Its current diagnosis approach (medical imaging and pathological exam) takes a long time before defining the appropriate treatment that is generally presented in chemotherapy, surgery and X-Ray treatment, which have harmful side effects on children's health.

The genetic and epigenetic factors associated with Wilms tumor are the WT Suppressor tumor genes that have an important role in normal kidney development. In the case of nephroblastoma, overexpression of oncomirs (Oncogenic miRNAs) inhibits their expression. MiRNAs are small non-coding RNA sequences of 22nt that regulate post-transcriptional gene expression. Moreover, miRNAs originating from WT are overexpressed, so that we can find them at high levels in blood circulation comparing with other miRNAs.

My research interest is to detect and profile extracellular miRNAs among some Moroccan WT patients. This has many goals; to use those miRNAs as disease biomarkers for diagnosis and prognosis of WT, to understand disease pathogenesis and to correlate miRNA expression patterns with disease progression. MiRNAs could even have a role in Cancer therapy by the injection of other miRNAs that inhibit oncomirs. To achieve those goals, many molecular techniques are used from DNA and RNA extraction to DNA sequencing.

So far, we've succeeded in extracting miRNAs from different materials as blood, serum, plasma and embedded paraffin tissue. As well as transforming (reverse transcribing) those miRNAs into cDNA for qRT-PCR and sequencing.

III/ NCDS PREVENTION AND MANAGEMENT: DIABETES

A01/III - LE DIABETE GESTATIONNEL AU MAROC : EFFETS DE LA DETECTION ET DE LA PRISE EN CHARGE INTEGRES AU NIVEAU DES STRUCTURES DES SOINS DE SANTE PRIMAIRES

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Le DG est associé à des complications immédiates pour la maman et son nouveau-né et il augmente le risque pour la mère et son enfant de développer un diabète type 2 plus tard dans leur vie. Sa détection et son contrôle pendant la consultation prénatale sont donc importants pour la prévention de cette maladie chronique au Maroc. Une intervention de dépistage et prise en charge (PEC) du DG intégrée dans la consultation prénatale (CPN) au niveau des structures de santé primaires a montré que dans les centres d'intervention une femme sur cinq a été diagnostiquée comme ayant un DG. La prévalence du DG était de 23.7% à Marrakech et 18.3% à Al Haouz. L'analyse des données des 210 femmes incluses a montré un effet protecteur sur le développement d'une macrosomie chez le bébé (3,5% dans les centres d'intervention versus 17,8% dans les centres contrôles ; $p < 0,001$). Les femmes suivies dans les centres d'interventions avaient une moindre prise de poids et une glycémie à jeun mieux équilibrée. En moyenne, les femmes des structures d'intervention ont été suivies sept fois à leur centre de santé contre quatre visites de suivi dans les centres contrôles et l'intervalle moyen entre les visites était 11 jours dans les structures d'intervention contre 19 jours dans les centres de contrôle ($p < 0,001$). Il n'y avait pas de différences concernant le mode d'accouchement ou l'âge gestationnel moyen à l'accouchement. En outre, l'intervention a montré un effet positif sur la motivation des infirmières et des sages-femmes, malgré le surplus de travail lié à cette activité.

A02/III - DEVELOPMENT AND EVALUATION OF A MOBILE MONITORING AND INTERVENTION APPLICATION FOR PATIENTS WITH TYPE 2 DIABETES: STUDY PROTOCOL

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Background: Moroccan health system is often face serious challenges in diabetes management. In other hand, patients with diabetes cope with many problems, especially limited access to health care networks, particularly for those living in isolate rural areas. The use of mobile technology is now, established as being useful for improving diabetes management. The main objective of this project is to develop a mobile app, which could add value by promoting self-management of diabetes-related behaviors and relieving health system.

Methods: This project include three steps: firstly, we conducted two cross-sectional studies among patients and physicians in order to describe current practices regarding the follow-up of diabetes, also to define problems that patients and physicians are encounter in their daily practice as well. As a second part, we will define with experts in endocrinology and diabetology, monitoring components that can made remotely. Results will be exploit to develop the mobile application in collaboration with a computer team. In order to assess the usability and effectiveness of this application, the final step will consist to conduct a cohort study among a sample of patients with diabetes and health professionals involved in the diabetes monitoring.

Preliminary results: We have conducted the studies among patients and physicians, and the data are still at the analysis step. Global health implications: This mobile application could contribute to the reorganization of Moroccan diabetes management by avoiding unnecessary consultations, decreasing the burden on health system, reinforcing links between patients/physicians and increasing self-care behaviors.

A03/III - TYPE 2 DIABETES AND PRE-DIABETES MELLITUS IN CHILDBEARING AGE WOMEN IN MIDDLE EAST AND NORTH AFRICA, 2000–2018: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction : We systematically summarized the weighted prevalence of T2DM and pre-diabetes (pre-DM) in childbearing age women (15-49 years) in the Middle East and North Africa (MENA) region.

Methods : We comprehensively searched six electronic databases, from 2000 to 2018. The MENA region defined according to the World Bank Country and Lending Groups. Retrieved citations were screened and data extracted by at least two independent reviewers. The weighted T2DM and pre-DM prevalence were estimated using random-effects model.

Findings and Conclusions : Fifty-two research reports were found eligible. Fifty reports reported 111 T2DM prevalence measures (range: 0.0–35.2%) in 15 countries and 24 reports reported 52 pre-DM prevalence measures (range: 0.0–40.0%) in 10 countries. The overall weighted prevalence of T2DM in the 15 countries and pre-DM in the 10 countries was 6.6% (95% CI 5.2–8.1) and 7.6% (95% CI 5.2–10.4), respectively. T2DM was more common in the Arab Peninsula countries (7.6%, 95% CI 5.9–9.5), followed by North African countries and Iran 6.5% (95% CI 4.3–9.1), and countries in the Fertile Crescent (2.9%, 95% CI 1.7–4.4). The prevalence of prediabetes was highest in Fertile Crescent 22.7%; followed by the Arab Peninsula 8.6%, and North Africa and Iran 3.3%. Penetration of DM in childbearing age women would lead to adverse pregnancy outcomes and accelerate the intergenerational risk of DM.

A04/III - VITAMIN D: THE LINK IN DIAGNOSIS AND MANAGEMENT OF TYPE 2 DIABETES

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Introduction: Worldwide, epidemics of obesity, type 2 diabetes (T2D) and vitamin D deficiency have emerged during the past three decades. These are in part due to changing of behavior and; poverty and the increased consumption of poor-quality, caloric-dense, cheap food; sedentary lifestyles; and less exposure to sunlight.

Methods: We performed a systematic review of English-language studies using MEDLINE through January 2012. Longitudinal cohort studies reporting associations between vitamin D status and incident Metabolic Syndrome and type 2 diabetes, and randomized controlled trials (RCTs) of vitamin D supplementation, were included. Study characteristics and results were extracted, and study quality was assessed.

Results: A total of 8 observational cohort studies and 11 RCTs were included. In meta-analyses of observational studies, vitamin D intake > 500 international units (IU)/day decreased the risk of type 2 diabetes by 13% compared with vitamin D intake < 200 IU/day. Individuals with the highest vitamin D status (> 25 ng/ml) had a 43% lower risk of developing type 2 diabetes (95% confidence interval 24, 57%) compared with those in the lowest group (< 14 ng/ml).

Conclusion: Testing for serum vitamin D levels should become a routine part of the managements and health maintenance of persons with metabolic syndrome, T2D, obesity.

A05/III - OBESOGENIC ENVIRONMENTS - OPPORTUNITIES FOR POLICIES IN MIDDLE-INCOME COUNTRIES

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Introduction : Obesity is one of the main risk factors for many non-communicable diseases and it is influenced by a complex, multifaceted system of determinants. Many studies have found an association between the food environment and obesity; however, the role of different types of food outlets and their contribution to obesity is unclear.

Methods : A systematic review was performed to evaluate the link between food environment and obesity and to determine gaps and limitations in the literature. Medline via OvidSP, Scielo, Scopus, and Google Scholar databases were searched. Search terms included spatial analysis, obesity, and food environment.

Findings : A total of 595 papers were retrieved and after inclusion and exclusion criteria, 65 studies were kept. Positive associations ($p < 0.05$) between the food environment and obesity were found by 39 studies (56%). Fast-food outlets (22 studies, 34%) and convenience stores (7, 11%) were the most associated with obesity. Limitations of the reviewed studies included non-representative populations (24 studies, 37%), self-reported data (50, 77%) and assumptions about food outlet use.

Conclusions : Although many studies found a positive association of the food environment with obesity, inconsistencies remain. Several methodological issues can affect the quality of evidence of the association of the food environment with obesity. The selection of geographical methods and statistical methods must comply with the characteristics of the geographical location and the type of data being used. Public policy aimed at regulating the food environment could contribute to increase the availability and accessibility of healthy food and therefore decrease the burden of obesity.

A06/III - ENGLAND'S NATIONAL CARDIOVASCULAR DISEASE RISK ASSESSMENT PROGRAMME (NHS HEALTH CHECK): A SYSTEMATIC REVIEW OF EVALUATIONS

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Introduction: The NHS Health Check, England's national cardiovascular risk assessment programme, is the first of its kind in the world and aims to detect undiagnosed disease and reduce vascular complications. This 'upstream' approach to prevention is, in theory, clinically effective and cost effective. However, regional variation in uptake and delivery exists. Understanding different organisational provision is important to allow for improved management, good practice and better health outcomes. This systematic review summarises the current evidence.

Methods: Seven electronic databases and single citation tracking were searched for studies recording NHS Health Check-related outcome measures. Studies between April 2009 through December 2018 were considered.

Findings: Fourteen eligible studies and one dataset were included. Study quality was mixed yet some statistically significant data were observed and clinically relevant. Data on coverage and uptake are limited. Uptake is higher with women and lower in more deprived areas. Very few studies reported referral rates for lifestyle interventions. The NHS Health Check is associated with incremental disease detection.

Conclusion: There is considerable diversity in the delivery of NHS Health Checks in primary care. Disparities in uptake across the whole of England demonstrate inconsistencies in programme delivery nationally. A formal, standardised model may be required to optimise patient outcomes in cardiovascular disease. Such a standard will make implementation more consistent and evaluation more measurable. Methodological and clinical heterogeneity reported across studies renders the generalisation of review results a challenge. High quality studies comparing organisational provision are required.

Registered: PROSPERO Registry of systematic reviews (#CRD42017076451)22

A07/III - COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) FOR TYPE 2 DIABETES MELLITUS MANAGEMENT

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Introduction: Diabetes mellitus is a chronic illness which leads to disability, hospitalization and eventually death. There is an emerging trend worldwide for patients to use complementary and alternative medications (CAMs) in an attempt to improve the outcomes of their illnesses as well as general well-being.

Objective: the main purpose of this study was to identify the popularity of using complementary and alternative medications and its associated factors among the Libyans adult who were diagnosed with type-2diabetes mellitus. Method: A cross-sectional quantitative study was conducted among 192 adult diabetic patients, who are still under follow-up at Endocrine ward,Zliten General Hospital (ZGH) and Kadosh Diabetic Center (KDC), Libya. Descriptive statistic and bivariate analysis were performed to assess all the included variables and to identify the association between all variables and the outcome.

Result: Out of 192 samples, the prevalence of using CAM in Libya was 0.6%. The mean age \pm of the participants was 46.21. Most of the respondents were males (56.8%) and the most used CAM wascinnamon (41.9%). All of the demographic factors were not statistically associated with CAM consumption ($P>0.05$), while the type of medication used for diabetes was statistically associated with CAM intake ($P>0.001$) forboth variables. However, the availability, duration and satisfaction intake of CAM were associated with blood sugar controlling by CAM ($P>0.05$).

Keywords: Diabetes mellitus, complementary and alternative medications (CAM)

IV/ NCD PREVENTION AND MANAGEMENT: BEHAVEAVIOURS

A01/IV - EMERGING PATTERNS OF SMOKING AMONG YOUTH IN MECCA, SAUDI ARABIA: THE CASE OF VAPING

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Introduction : Young generations are an important market for the tobacco business since most smokers try their first cigarette before the age of eighteen. Electronic Cigarettes (e-cigarettes) are a common mode of smoking among teens and the number of users is increasing exponentially.

Objective : The aim of this work is to estimate the current prevalence of the usage of e-cigarettes and vaping among adolescents between the ages of 15 and 19 in the city of Mecca, Saudi Arabia.

Methods : This study was conducted among 534 students at four high schools. Students were asked to complete a 23-item questionnaire retrieved from the global youth tobacco survey. Descriptive statistics and regression analysis to report on likelihood of e-cigarettes use were conducted.

Results : A total of 109 (20.6%) of the participants reported being smokers of e-cigarettes. Being a male, in the second year of high school, ever experimenting with regular tobacco cigarettes, current shisha smoker, living with a smoker, and believing that e-cigarettes are less addictive than regular cigarettes, were all factors independently associated with e-cigarettes use in this sample of adolescents.

Conclusion : Among adolescent smokers, even minimal experience with smoking is correlated with pro-smoking attitude. E-cigarette use is common in adolescents and obviously related to use of other combustible tobacco products. Tobacco control efforts at all levels should eliminate factors fostering future tobacco use in order to minimize the burden of disease and disability in vulnerable populations.

A02/IV - SPOTLIGHT ON EPIDEMIOLOGICAL RESEARCH ON WATER PIPE TOBACCO SMOKING IN EASTERN MEDITERRANEAN AND NORTH AFRICA REGION: A BIBLIOMETRICS ANALYSIS UP TO 2018

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Background: Water pipe smoking (WTS) is becoming the most common tobacco use method among youth in Eastern Mediterranean, and is rapidly gaining attractiveness in North Africa. We aimed to give an overview and evaluate epidemiological scientific production on WTS in the Eastern Mediterranean and North Africa (MENA) region.

Methods: A bibliometrics analysis of articles published over the last decade was conducted by reviewing the following bibliographic databases: Medline and Google Scholar. Results were discussed under the following perspectives: publication trends, countries, keywords, impact factor (IF) and subject categories.

Findings: In total, 92 publications were retrieved from 2009 to 2018. Epidemiological research on WTS has increased rapidly over past 10 years, most notably in the last 5 years. "Water pipe smoking", "epidemiology", "health effects", "hooka", "tobacco dependence", "substance use", "adolescents", "health promotion", "evaluation" and "interventions" were the most commonly used keywords. The top 3 productive countries were Iran, Lebanon, and Saudi Arabia. The highest mean IF was reported for Lebanese publications (3.51) followed by United Arab Emirates (2.66) then Iranian publications (2.36). Main subject categories were epidemiology of WTS in youth, motivational factors of WTS initiation, WTS health effects and evaluative interventions for WTS cessation.

Conclusions: Based on this bibliometrics analysis, it comes to the conclusion that the growing public health concern about WTS in the MENA region was followed by a growing scientific production in the last decade aiming to describe WTS burden, evaluate implemented policies and generate recommendations.

A03/IV - IDENTIFYING PEOPLE WITH DEMENTIA FOR EPIDEMIOLOGICAL ANALYSIS IN ELECTRONIC PRIMARY CARE RECORDS IN THE UK

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Background : Many epidemiological questions need to be answered regarding dementia, including the causes, prognosis, comorbidities, and treatment of the condition and complications. A routine electronic primary care dataset provides a way of investigating some of the complicated factors.

Objectives

This study has explored this by conducting a systematic review to understand how dementia has been identified previously in primary care databases in the UK, and added to this by exploring additional terms and symptoms, and medications in identifying people with dementia.

Methods : The study estimated the prevalence and incidence rates of dementia in The Health Improvement Network database and compared with other longitudinal studies using the comprehensive list of diagnostic codes.

Findings : The estimated incidence rates per 1,000 person-years for the 60+ age group who had any of the first diagnosis among the QOF defined codes, Other diagnoses, Dementia symptoms and Prescribed medications were 2.5, 4.7, and 15.9 in 1995, 2004, and 2015 respectively. The estimated prevalence were 2.8, 3.2, and 10.2 in 1995, 2004, and 2015 respectively.

Conclusions : The codes related to dementia symptoms seem to cover a broad definition of dementia or pre-existing dementia population in the UK primary care records. At least, using of the Other diagnoses in addition to the QOF defined codes, and Prescribed medications were evidenced that will not missing out a number of people with dementia.

A04/IV - NEW APPROACH FOR PROVIDING MENTAL HEALTH CARE IN BUSY CLINICS

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Mental mental disorders form 60% of the causes of patient visits to any out patient clinics. Without controlling stress of depression and anxiety organic diseases couldn't be control. This is why most of chronic organic disorders not under control. Therefore, 5-Steps patient interview consist of

1. Suspected stage: when doctor can provide MH care.
2. Screening for hidden agenda and stress (if negativite mean no need for MH care)
3. Scoping: is patient need a referral or not
4. Diagnosis stage: if patient does not need a referral. Is he has depression and or anxiety anxiety
5. Management: when patient needs medication and or narrative therapy (which is fit in busy clinics) All these steps of approach will not consume more than 10 minutes.

A05/IV - THE INFLUENCE OF HEALTH BELIEFS AND SOCIODEMOGRAPHIC VARIABLES IN THE CARDIOVASCULAR RISK OF SAUDI WOMEN

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Background: Cardiovascular disease, a major worldwide public health issue, and significant concern to the government of Saudi Arabia due to its impact on morbidity, mortality, and healthcare budgets.

Aim : This study assessed the cardiovascular health beliefs of Saudi women, and investigated them in correlation to sociodemographic variables, and actual CVD risk.

Method: A cross-sectional study design was conducted to include women attending the primary care clinics at King Saud Medical City, in Riyadh. A convenience sample was selected of

adult women without pre-existing CVD. Health belief and sociodemographic data and Framingham Risk Score was calculated.

Results: Participants' beliefs significantly underestimated their actual risks of CVD with 43.4% calculated to be at high risk, they also presented a low perception of susceptibility. Compounding this, while 63.5% understood the severity of CVD, 75.2% had a low to moderate perception of benefits. 86.7% did not know how to perform CVD risk reducing exercises, and 65.9 % disagreed that they had access to exercise facilities.

There was a significant relationship between the FRS across the income, marital status, education, occupation and work status categories ($p <= 0.001$). Significant differences were found in comparing: perceived benefits with marital status, perceived severity and benefits with level of education, perceived severity and benefits with occupation, and perceived severity and benefits in relation to financial income.

Conclusion: This study identified the gaps and barriers to improve awareness of CVD risk among women in Saudi Arabia.

A06/IV - ANALYSE DE LA RELATION ENTRE LES MALADIES NON-TRANSMISSIBLES ET LA CROISSANCE ECONOMIQUE CHEZ LES PAYS EN VOIE DE DEVELOPPEMENT : UNE PERSPECTIVE EN DONNEES DE PANEL

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L'objectif de la présente recherche est d'étudier l'impact des maladies non-transmissibles sur la croissance économique des pays en développement. En effet, la littérature spécialisée en la matière aurait confirmé l'existence de relations causales entre le fardeau épidémiologique des maladies chroniques et des aspects macroéconomiques. De ce fait, cette analyse présente une évaluation du manque à gagner économique qui serait dû à une augmentation éventuelle du taux de mortalité des maladies non-transmissibles. Cette analyse est conduite par le biais d'un modèle économétrique en données de panel dynamique de 29 pays à revenu intermédiaire, sur un échantillon temporel qui s'étale entre 1995 et 2016. Le modèle a été estimé par la Méthode des Moments Généralisés en Système. Le choix de la méthode est justifié par la présence de variables explicatives prédéterminées ou faiblement exogènes dans le modèle. Ce dernier tient compte de la mortalité des maladies chroniques, de l'investissement en capital fixe, de la force du travail et de la dynamique de la population, et ce afin de capter l'effet des déterminants majeurs de la croissance économique. Les résultats montrent un effet négatif et significatif de la mortalité due aux maladies non-transmissibles sur le revenu agrégé des pays composant l'échantillon, ainsi qu'une significativité sur l'ensemble des variables de contrôle. La fiabilité des estimations a été vérifiée grâce aux tests statistiques d'exogénéité des instruments utilisés dans l'estimation et de l'autocorrélation des résidus, ainsi que l'estimation de spécifications alternatives du modèle de base visant à vérifier la consistance des estimations de la spécification initiale.

A07/IV - PERCEPTION DE LA PRESCRIPTION DU GENERIQUE EN MEDECINE GENERALE : ENQUETE A LA COMMUNE MOULAY RACHID DE CASABLANCA

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Introduction : Au Maroc, le marché du médicament générique est en croissance, mais l'intérêt de sa prescription n'est pas vu du même œil par l'ensemble des médecins

Objectif : Déterminer les facteurs influençant la prescription du générique par les médecins généralistes (MG) de la commune de Moulay Rachid à Casablanca. Patients et Méthodes : Il s'agit

d'une étude observationnelle transversale, exhaustive, à visée descriptive sur une période de 9 mois allant de Mai à Décembre 2018 ; et qui s'est déroulée dans la commune Moulay Rachid de Casablanca.

Résultats : Sur les 49 médecins interrogés, 40,8% d'entre eux prescrivait le générique, essentiellement dans le but de faciliter l'observance selon 85,7% des MG. La réticence de la majorité s'expliquerait par une efficacité jugée moindre par rapport au princeps selon 63,3% des MG, ainsi qu'une fabrication jugée moins rigoureuse selon 44,9% d'entre eux. Une différence d'efficacité et de tolérance a été notée par 53,1% des MG participants à l'étude ; et 79,6% d'entre eux étaient contre la substitution du princeps par un générique en cas de maladie aigue ou chronique. Pour 95,9% d'entre eux, les études de bioéquivalence pourraient les encourager à en prescrire.

Conclusions : la promotion de la prescription du générique nécessiterait entre autres des guides d'utilisation et des études de bioéquivalence.

Mots-clés : prescription-médicament générique-médecin généraliste

V/ OPENING THE DOORS TO STRENGTHENING HEALTH SECURITY

A01/V - EMPOWERMENT OF PUBLIC HEALTH SYSTEM IN EARLY DETECTION AND RAPID RESPONSE ?BY BUILDING FRONTLINE EPIDEMIOLOGICAL CAPACITY-MOROCCO, 2018-2019?

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Background: The Ministry of Health of Morocco launched Front-Line Field ?Epidemiology Training Program. It is a four-month in-service training program that ?focuses on detection of and response to diseases and events of public health ?concern. The first training course was conducted for first cohort between November ??2018 and March 2019.

Objective: We aimed to raise the epidemiological capacity of Public Health ?professional contributing in epidemiological surveillance at regional and provincial ?level, and evaluate the training program effectiveness.

Methods: A team from National School of Public Health and Directorate of ?Epidemiology was assigned for planning; preparing and adapting FETP-Frontline ?training material referenced by CDC and EMPHNET at the national context. ?Inclusion criteria for participants were applied. Three workshops were conducted, ?and participants were asked to conduct field activities after each workshop. Each ?participant was supervised by an advanced FETP graduate. Evaluation approaches and tools include; documents review, questionnaires and check lists. Instructors, ?Mentors and Participants were asked to complete an evaluation tool after each ?workshop and fieldwork. Data was collected and analyzed.

Results: Out of 32 Participants joined the program, 30 (93.8%) were graduated. ?Participants were males in 87.5%. Out of 20 participants from provincial level, 4 ?were from regional level, 4 from point of entry and 4 from military sector. During ?their first fieldwork, 26/32 (81.2%) noticed low surveillance reporting at provincial ?level regarding timeliness and completeness, and 30/32 (93.8%) participated in ?outbreak investigations. By the end of training; knowledge of subject of epidemiology was improved, the difference between results of pre- and post-test ?raised by (33.5%). All participants gained presentation skills and were able to write ?scientific reports. Yet 4/30 (13.3%) participants need practicing data analysis on ?Microsoft Excel.

Conclusions: FETP-Frontline was successful and met its objectives. It is the best ?solution to reach at least 1 trained epidemiologist for 200 000 inhabitant by ?keeping them in their job. However, it is necessary to expand the involvement of ?the

food inspectors, and veterinarians targeting early detection and response.

A02/V - CONCEPTION OF AN EPIDEMIOLOGICAL SURVEILLANCE SYSTEM AT ?POINTS OF ENTRY, MOROCCO, 2018?

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Introduction : The Competent Health Authority for Points of Entry (PoE) in Morocco is the Ministry of Health (MoH). The Borders Health Control Service (SCSF) is organized into a central unit at MoH and 32 PoE offices. A review of the SCSF organization done in 2016 has reported the need of strengthening the coordination between the national health surveillance system (SNSE) and authorities at PoE to respond to the International Health Regulations (IHR 2005) requirements.

Methods : This system was based on the WHO "Coordinated public health surveillance between PoEs and national health surveillance systems, advising principles (2014, 2018 editions)". To strengthen health monitoring at PoEs to cover risks impacting public health, the syndromic, indicator-based and event- based surveillance approaches were adopted and a close coordination with SNSE was defined.

Results : A list of events required by the IHR and the SNSE was established. Identified actors at PoE must proceed to immediate notifications for any event may impact public health on the basis of a syndromic definition of disease cases. The SCSF PoE office classifies the event received into a pre-established case definition list to identify whether it requires immediate reporting to the SCSF central unit by telephone; email and paper report and simultaneously to SNSE in local, regional and national levels. We have established a SCSF database on EPIINFO7 with web survey and a SCSF website, to enhance notifications and feedback.

Conclusion : By rapidly detecting risks and events, this system will contribute to the Early warning and response (EWAR) mechanism being installed in Morocco.

A03/V - FRAGILE & CONFLICT AFFECTED HEALTH SYSTEMS; LEBANON AND THE SYRIAN HEALTH CRISIS

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Since the onset of the Syrian crisis in 2011, Lebanon welcomed around 1.5 million Syrian refugees and Palestinian refugees from Syria. This increase in population represents 30% of Lebanon's pre refugee crisis population. Accordingly, Lebanon has the largest concentration of refugees per capita in the world. Due to the government's no-camp policy, there are no formal camps. A refugee crisis of such a large magnitude is a severe shock to the health system, and threatens ?continuity of service delivery, destabilizing governance and limiting access to care. Communicable diseases, such as polio, measles and waterborne infections, are considered the greatest public health risks in refugee situations and the risk was particularly acute in the Syrian refugee crisis due to the resurgence of Polio in Syria. To date, however, ?the Lebanese health system has been able to accommodate and adjust to the refugee crisis, absorbing ?the additional load, and retaining the refugees in the country. Despite all the threats, Lebanon managed to stay Polio free, maintain relatively high immunization rates, and contain outbreaks. An analysis of the Lebanese healthcare system shows that Lebanon's success stems from capitalizing on the existing health system inputs and processes while networking and conducting effective external resources mobilization in order to ensure health system resilience.

VI/ OPENING THE DOORS TO PRIMARY HEALTH CARE AND FAMILY MEDICINE (PART 1)

A01/VI - THE NEW SAUDI MODEL OF CARE, A NEW SHIFT OF PARADIGM

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Saudi Arabia has witnessed a huge achievement in health care over the last 50 years in different dimensions of infrastructure, workforce, outcomes.

However, this achievement has led to new challenges that make maintaining rather than improving healthcare a nightmare for health leaders. Saudi Arabia has realized the importance of transforming healthcare and the whole ecosystem to meet future demands. This new and large scale project was launched in 2016 to address different issues in health and health related arena.

Model of Care as one of the important programs that will shift the paradigm of health care delivery focusing on biopsychosocial wellness and empowering people. It also addresses the importance of virtual and primary care in an integrated fashion with community and secondary and tertiary care redesigning the person journey through out all different care levels

A02/VI - THE IMPORTANCE OF SELF-CARE IN THE CONTEXT OF 21ST CENTURY LIVING: IMPLICATIONS FOR HEALTH SYSTEMS WORLDWIDE

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This talk will illustrate the singular importance of self-care (and its corollary 'self-management') in the promotion of vitality & healthy ageing in the context of 21st-Century living and will consider its impact on healthcare systems worldwide.

The talk will orient stakeholders including MoHs & commissioners of health & well-being as regards the meaning of self-care and widely accepted conceptual frameworks.

We will then consider suitable evidence-based self-care interventions that could delay or even prevent the onset of NCDs, with reference to 'best buys' and best practice guidelines to promote self-care & self-management of everyday and long-term conditions.

We will discuss the policy implications of promoting a 'health & self-care in all' policy approach from the perspective of governments, MoH, NGOs (and even employers) in a bid to reduce expenditure in health systems by empowering individuals (regardless of their state of health) to live longer and healthier lives.

We will then consider the importance of self-care praxis and lifestyle medicine approaches as a foundational cornerstone of robust primary health care systems worldwide (as recently declared in the updated Alma Ata Declaration to include self-care as a central pillar of primary healthcare systems, and the eagerly anticipated publication of WHO normative guidelines for Self-Care in April 2019).

We'll conclude by considering extant barriers and divers for the implementation of self-care interventions, and how any such application could vary between resource rich and poor settings.

A03/VI - MEASURING TECHNICAL EFFICIENCY OF URBAN COMMUNITY HEALTH CENTRES - DENTAL CLINICS IN KHARTOUM STATE 2015/2016

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Introduction: In developing countries like Sudan, there is usually a low expenditure on health and scarcity of resources thus the available resources must be utilized efficiently and measured to assess the wasted portions and find solutions and implicate policies to prevent it.

The aim of this study was to measure the relative technical and scale efficiencies of primary urban dental clinics 2015/2016 in Khartoum state using data envelopment analysis technique.

Methods: Data envelopment analysis is a non-parametric statistical tool was used in this paper to measure the relative technical and scale efficiency, the model was output-oriented under constant returns of scale considering full coverage of the eighty seven primary urban dental clinics in 2016 and the seventy four primary urban dental clinics in 2015 in Khartoum state, using 2 inputs (number of dentists, supplies cost) and 2 outputs (treated patients, referred patients).

Findings: The findings suggests at 2015 only 6 (8.1%) clinics were efficient where as 68 (91.8%) were inefficient under constant returns to scale, on the other hand in 2016 the number of efficient clinics were 4 (4.5%) and the inefficient were 83 (95.4%) under constant returns to scale.

The scale efficient clinics were 32 (43.2%) and 9 (10.3%) in 2015, 2016 respectively. Conclusions:

It's concluded that the level of pure technical and scale efficiency of the assessed dental clinics is significantly low and needs to be improved to contribute to the reform of the health system in Sudan and limit the leakage of the limited resources.

A04/VI - PRISE EN CHARGE GLOBALE ET INTEGREE D'UNE PERSONNE EN SITUATION DE HANDICAP

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Selon le rapport de l'OMS 2011, environ 1 milliard de personnes vivent avec un handicap dans le monde. Les plus touchés par le handicap sont les femmes, les personnes âgées et les pauvres. Les enfants et jeunes de moins de 15 ans représentent 1/20 des personnes avec handicap.

Au Maroc et selon l'enquête nationale sur le handicap de 2014, réalisée par le Ministère de la Solidarité, de la Famille, de l'Égalité et du Développement Sociale, la prévalence du handicap au niveau national est de 6,8%, soit près de 2.264.672 personnes (6,7% chez les femmes et 6,8% chez les hommes).

Malgré la ratification par le Maroc de la convention internationale sur les droits des Personnes en Situation de Handicap (PSH) le 8 avril 2009, et malgré la constitution nationale de 2011, visant entre autres, le renforcement juridique pour la protection des droits des PSH (article 34), les PSH continuent à subir des discriminations multiples, les privant de leurs droits fondamentaux (accès à l'éducation, à la santé, à l'emploi) et qui de surcroît ne sont pas intégrées dans les politiques publiques de protection sociale. Ainsi la réalité sociale résiste au changement et l'accès aux services sociaux de base, notamment les services de santé, prête plus que jamais à l'inquiétude.

En référence à la classification internationale de fonctionnement (CIF), qui a été élaborée OMS afin de fournir un cadre de référence pour la description et l'organisation des informations relatives au fonctionnement et au handicap, la prise en charge d'une PSH, quelque soit son type de handicap, ne peut être qu'intégrée et globale, pour permettre un développement global harmonieux et adéquat et par conséquent une intégration socio économique appropriée.

Le Centre National Mohammed VI des Handicapés (CNMH), structure de référence nationale en matière du handicap, a mis en place un dispositif pilote au niveau national (5 structures) composé d'une équipe multidisciplinaire permettant d'assurer une prise globale et intégrée à travers un diagnostic précoce et un projet de vie personnalisé à la fois thérapeutique et socio économique. Cette équipe multidisciplinaire est constituée de professionnel polyvalent médico social et éducatif, capable de dispenser des services médico éducatifs et de rééducation appropriés.

Les principaux déterminants de la prise en charge globale et intégrée d'une PSH mis à la disposition de l'équipe multidisciplinaire sont :

- L'accès aux services de santé primaires appropriés, notamment les composantes économique (financière), physique

(handicap moteur), information (handicap sensoriel), compétences requises (handicap mental).

- La disponibilité d'outils de formation et de renforcement des capacités du personnel impliqué dans l'équipe multidisciplinaire,
- Un système d'information pertinent permettant un suivi approprié des indicateurs du développement psycho moteur et du niveau d'amélioration des compétences fonctionnelles de la PSH.
- Un système de référence et contre référence, mis en place avec les différents niveaux de prise en charge en santé (secondaire et tertiaire),
- Le partenariat développé entre le CNMH et les établissements intervenants dans la prise en charge, notamment l'hôpital, le système éducatif et le système de qualification et d'insertion professionnelle. La présentation proposée par le CNMH consiste à décrire la problématique d'intégration de la composante «handicap» dans les programmes de santé publique au niveau national et à mettre en évidence l'apport du travail de l'équipe multidisciplinaire, mis en place dans cinq structures du CNMH, pour une prise en charge globale et intégrée, ainsi que les déterminants de réussite et les résultats de cette initiative.

VII/ OPENING THE DOORS TO PRIMARY HEALTH CARE AND FAMILY MEDICINE (PART 2)

A01/VII - ASSOCIATION OF HYPERTENSION WITH CHRONIC KIDNEY DISEASE IN AN AGRICULTURAL MOROCCAN ADULT'S POPULATION

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Introduction: Chronic kidney disease (CKD) is considered as a serious public health problem, associated with high cardiovascular morbidity, mortality and low quality of life.

Objective: To estimate the prevalence and the association of CKD with hypertension among Moroccan population of Sidi Bennour a province of Morocco.

Methods: A prospective cohort was carried out involving 182 subjects aged 18 or older, randomly selected from the province health care centers. Socio demographic and clinical data as well as information on the participants' lifestyle were collected using a structured questionnaire. Blood samples were collected and the serum creatinine was determined. Subsequent Glomerular Filtration Rate (eGFR) was estimated by the Modification of Diet in Renal Disease (MDRD) formula and the CKD was defined by an eGFR <60ml/min/1.73m².

Findings: The participants mean age was 53.58 ± 12.06 years, with a sex ratio of 0.30 and the prevalence of CKD was 4.4%. Among others, hypertension is a factor associated with an increased risk of CKD as 75% of subject with CKD were hypertensive (p=0.008).

Conclusions: The study data show a strong relationship between chronic kidney disease and hypertension. The study results recommend a monitoring of hypertension considered as a leading cause of this non-communicable disease.

A02/VII - ROLE DU MEDECIN GENERALISTE DANS LA PRISE EN CHARGE DES PATIENTS HYPERTENDUS DANS LA REGION DU GRAND CASABLANCA

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Introduction : L'hypertension artérielle (HTA) constitue un enjeu majeur de santé publique, de par sa fréquence, ses complications et les coûts de sa prise en charge (PEC).

Objectif : Tirer l'état des lieux de la PEC de l'HTA dans des structures de première ligne publique de trois délégations de la région du Grand Casablanca.

Participants et méthodes : Une enquête transversale à visée descriptive à été réalisée à l'aide d'un questionnaire pré-testé, auto-administré auprès des médecins généralistes.

Résultats : La quantité moyenne des thérapeutiques (61,7%) et la qualité des moyens mis à disposition (43%) des médecins était jugée insuffisante. Le référentiel de PEC délivré par le ministère était utilisé par 65,8% des praticiens et 78,3% des médecins calculaient le risque cardiovasculaire global (RCVG) avant le traitement. La demande d'un bilan lipidique dans le cadre d'un bilan initial était plus fréquente chez les médecins du genre féminin. Les médecins traitant leurs patients selon le RCVG avaient plus d'années d'ancienneté. La demande d'une créatinémie une fois par an pour bilan de suivi était associée à la formation continue.

Les problèmes majeurs entravant la PEC correcte étaient : le statut socio-économique faible, la rupture de stock des médicaments hypertenseurs, l'analphabétisme, le niveau scolaire bas, le système d'information lourd et le problème d'accès par les patients aux structures hospitalières.

90% des médecins ont estimé avoir besoin d'une formation sur la prise en charge de l'HTA. Conclusion : Equiper les centres en moyens thérapeutiques et diagnostic suffisants, organiser des séminaires de formation pratiques, informatiser le système d'information et étendre la couverture médicale de base, pourraient constituer des pistes d'amélioration de PEC des patients hypertendus.

A03/VII - ATTRACTIVITE DE LA PROFESSION DE MEDECIN GENERALISTE CHEZ LES ETUDIANTS EN MEDECINE

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Introduction : Le médecin généraliste pivot du corps médical, dans la mesure où il permet une réponse aux problèmes de la santé dans leurs dimensions physiques, psychologiques et sociales, représente le premier contact de la population avec le système de soins.

Objectif : Estimer la prévalence du choix de la médecine générale chez les étudiants en médecine et secondairement de déterminer les facteurs qui pourraient influencer ce choix.

Méthode : Enquête transversale à visée descriptive par questionnaire pré-testé auto administré auprès d'un échantillon représentatif de 660 étudiants de 6ème et 7ème année de la faculté de médecine de Casablanca.

Résultats : A l'entrée à la faculté de médecine, seulement 21,9% des étudiants prévoyaient d'être des médecins généralistes ; Les étudiants les plus âgés (26ans) choisissaient plus la médecine générale (27,5%) qu' étudiants plus jeunes (19%).

Les étudiants mariés choisissaient plus la médecine générale que les étudiants célibataires. (35% vs 19,5%, p=0,001)

Les étudiants qui ne pensaient pas à la recherche médicale comme facteur de réussite professionnelle choisissaient plus la médecine générale que ceux qui optaient pour la recherche médicale (29,1% vs 20,2% ; p=0,032).

Les étudiants qui avaient fixé un revenu financier inférieur à 10000DH choisissaient plus la médecine générale (31%) contre 17% ayant un objectif financier >30000 DH (p=0,033).

Conclusion : Afin d'attirer davantage les étudiants vers la médecine générale, il serait nécessaire d'adopter des changements majeurs touchant l'enseignement théorique et pratique et de modifier les conditions de travail en fonction des attentes des futurs médecins.

A04/VII - THE IMPACT OF ACCREDITATION ON PATIENT SAFETY CULTURE

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Objective: Although accreditation is on the rise, little is known on its impact on patient safety culture. The aim of this work was

to study the impact of accreditation on patient safety culture and identify factors affecting safety culture.

Methods: The study was carried out in two matched hospitals; an accredited hospital and a non-accredited one. The sample size was estimated to be 156 healthcare providers from each hospital who were selected using convenient sampling technique. The participants answered a validated Arabic version of the AHRQ's Hospital Survey on Patient Safety Culture.

Results: It was found that accreditation had a significant positive effect on all aspects of patient safety culture except staffing and event reporting. Using logistic regression analysis, accreditation appeared to be the only independent factor affecting patient safety culture score with an odds ratio of 3.83 (95% CI 2.1-6.9). More than 75% of respondents in the accredited hospital scored >50% total safety culture versus 43.8% in the non-accredited hospital, (p<0.001).

Conclusion: Accreditation could be considered as a powerful tool for improving patient safety culture among healthcare providers.

A05/VII - QUELLE FEUILLE DE ROUTE POUR LA MISE EN PLACE DE LA MEDECINE DE FAMILLE AU MAROC ?

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Introduction : L'exigence de la réforme des soins de santé primaires et la mise en adéquation des compétences des professionnels de santé est un défi d'actualité au Maroc.

Cependant, un certain flou persiste quant aux démarches nécessaires pour inscrire la mise en place d'une médecine de famille en cohérence avec la réforme des soins de santé primaires dans une démarche durable et institutionnalisée.

Méthodes : Cette communication a pour objectif de dresser les principaux jalons d'une feuille de route pour la réforme de soins de santé primaire avec l'institutionnalisation de la médecine de famille.

Une analyse des expériences visant la promotion de la médecine de famille et la réforme des soins de santé primaires menées par les différents acteurs du système de santé marocain sera effectuée en regard du cadre de référence développé par l'OMS et la WONCA.

Résultats : Nous passerons en revue les principes fondateurs de la médecine de famille, et les principales démarches qui doivent accompagner sa mise en place au Maroc tout en insistant sur les enjeux relatifs à chacun des acteurs institutionnels impliqués dans ces démarches.

Discussion : Nous mettrons aussi l'accent sur les voies potentielles à suivre pouvant garantir la synergie et la cohérence entre ces différents acteurs pour réussir une réforme forte, durable avec un impact positif sur tout le système national de santé.

A06/VII - EVALUATION DE LA FORMATION MEDICALE CONTINUE DES MEDECINS GENERALISTES A CASABLANCA

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Introduction : La formation médicale continue (FMC) est particulièrement nécessaire dans les professions de la santé, en raison de l'évolution rapide des connaissances et des techniques. Objectifs : Décrire les pratiques des médecins généralistes (MG) ainsi que leurs attentes à l'égard de la FMC Méthode : Il s'agit d'une étude transversale à visée descriptive. Elle a été réalisée en 2016 dans deux délégations de la région du Grand Casablanca (Médiouna, Moulay Rachid), via un questionnaire auto-administré à des MG des secteurs public et privé. Résultats : Sur les 119 médecins généralistes interrogés, 89,3% d'entre eux ont jugé la formation initiale reçue lors de leur cursus universitaire insuffisante pour leur pratique médicale. La participation aux congrès et aux séminaires, était le moyen de FMC préféré pour

70,2% des médecins pour rester à jour. Les sujets les plus demandés étaient la gynécologie, la pédiatrie et l'endocrinologie pour 80% des MG. Des formations diplômantes en FMC ont été obtenues par 64% d'entre eux, entièrement à leur frais. L'obligation légale de la formation continue était refusée par 61,9% des participants, tandis que 70% d'entre eux trouvaient que l'incitation financière serait motivante pour y participer.

Conclusion : La constitution d'un comité de formation médicale continue rassemblant des représentants des facultés de médecins, du ministère de la santé et des associations des médecins généralistes pourrait aider à proposer des pistes d'amélioration
Mots-clés : Formation médicale continue-médecins généralistes-Casablanca.

VIII/ HEALTH PROMOTION AND COMMUNITY EMPOWERMENT

A01/VIII - PROBLEMS REGARDING DOCTOR PATIENT COMMUNICATION AMONG HOSPITAL AND PRIMARY HEALTH CARE PHYSICIANS.

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Objectives: To assess the problems of doctor patient communication among hospital and primary health care physicians.

Setting: King Abdulaziz National Guard Hospital, AlAhsa, Saudi Arabia

Methodology: A structured questionnaire form was used through self administration to get information regarding problems faced by physicians regarding doctor patient communication. The questionnaire included data such as physician's gender, place of work (hospital vs primary health care, and previous training in doctor patient communication skills. The problems of doctor patient communication included problems of doctor patient relations as well as problems concerned with reaching mutual decision making between physicians and patients.

Results: 82 physicians participated in the study of which 65% were males. The majority of the sample (76.2%) was involved in hospital practice and the rest in primary health care. Physicians who had undergone training in doctor patient communication skills amounted to 61.9% of the sample.

Regarding problems met 39.3% of the sample had insufficient time of interviewing and 19% had problems of establishing rapport with patients, while 54.8% felt that patients did not trust them.. Physicians who faced problems of patients providing contradictory history and presenting too many problems

Conclusion: Physicians in the hospital and primary health care are aware of problems that are related to poor doctor patient communication which calls for planning and implementing a strategy to train physicians on the skills of doctor patient communication.

A02/VIII- AN ANALYSIS OF THE OUTCOMES OF A HEALTH OUTREACH PROGRAM TO REFUGEES AND ASYLUM SEEKERS IN EGYPT

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Introduction: The numbers of refugees and asylum seekers in Egypt are steadily increasing, and they frequently face barriers to accessing healthcare services. In cooperation with "Save the Children International", Mersal Foundation in Egypt worked on a project that provides health outreach campaigns aiming to screen children aged 0 to 18 years old. This was done through pediatrics and ophthalmological full examination. We use the data generated from this project to explore health status of refugees and asylum seekers from different nationalities and across different age groups. Our hypothesis was that Syrian refugees in Egypt have better access to health services than refugees from other nationalities.

Methods : A dataset of 2327 medical record was examined, we focused on the age, nationality and the need for referral. Descriptive and inferential analysis of the data were done using SPSS.

Findings: 29% of the children examined during the campaign needed eyeglasses, 25.06 % among them needed referrals to other specialties. Highest percentage of referrals was 38% of these referrals were to dentists.

There was no significant difference in health status between Syrians and other nationalities concerning the number of free examination or number of referred children (P value > 0.05). Moreover, all children who presented, did not have health insurance.

Conclusions: Refugees and asylum seeker faces difficulties to access health services with good quality. More focus on service provision and reduction of the inequalities is needed as a step to achieve universal health coverage.

A03/VIII - UNPROTECTED AND UN-SAFE ACCESS TO EDUCATION AND WELL-BEING IN AN AREA C COMMUNITY ON THE WEST BANK, OCCUPIED PALESTINIAN TERRITORY (OPT)

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Introduction: Right to education is not achieved by all in the OPT especially in area C (60% Palestinian land controlled by Israeli military). Khan alAhmar is a Palestinian village located in area C between Israeli settlements, one elementary school is available, built from mud and tires. In 2017, demolition orders were issued by the Israeli Civil Administration threatening all Khan alAhmar buildings. We investigated Israeli practices affecting education in Khan alAhmar and effects on parents and children's wellbeing and education.

Methods: Qualitative study with twenty-eight semi-structured interviews and one focus group with students 10-15 years old attending the school and their parents chosen purposefully, focusing on barriers to school access. Informed consent was obtained from interviewees. Interviews and focus group were transcribed, read until themes emerged.

Findings: Parents and students reported political and financial barriers to school access. Political barriers reported by most include: the school's demolition order, the Israeli army's and settlers presence on way to school. Financial barriers were reported by many, including low income and inability to support student transportation to nearby areas schools. Most parents reported fear of children's injury. Some reported self-confidence loss as they stand helpless in front of armed attacks. All child-students expressed fear of losing their school, being harmed by the army. Half reported losing focus in classes. Some stressed wanting their parents to move to safer areas.

Conclusion: indicates that Israeli army and settlers practices preventing children's safe access to school are negatively affecting parents and students' wellbeing.

A04/VIII - COMMUNITY TRANSFORMATION, IS IT THE MAGIC OF PUBLIC HEALTH PROFESSION?

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Missing community understanding and cooperation, financial constraints and health personal shortages are the most serious challenges, which facing health care providers and decision makers to achieve effective and efficient health services. Community transformation for changing community attitude and way of thinking is the main effective factors to achieve successful health promotion, disease prevention programs, and controlling most of chronic diseases, which is one of the most characteristics skills of public health care providers. Most of the communities in developing countries are negative complaining consumers for health services, which add a lot of burden and negatively affecting the delivery and outcome of our services,

we may have some health education programs, but its effectiveness is still questionable, because its dependence on providing knowledge only.

Community Transformation Programs (CTP) which aiming to change consumer's way of thinking and attitudes is our proposal for overcome the previously mentioned problematic circumstances, and we believed CTP should be one of our strategies to insure positive and effective community involvement, and it will help to overcome many operational challenges during different community based activities.

The presentation will explore CTP effectiveness in different communities and environments, and our role as public healthcare profession in achieving an effective CTP will be explained, in addition of reviewing different methods for clarifying and measuring Community negative attitudes, Identification of community characters, effective strategies for active community involvement and comprehensive applicable transformation plans.

A05/VIII - APPORT DES AGENTS DE SANTE COMMUNAUTAIRE (ASC) DANS L'AMELIORATION DE LA QUALITE DES SOINS DANS LE DISTRICT SANITAIRE DE KITA, REGION DE KAYES, REPUBLIQUE DU MALI.

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Introduction : Les Soins Essentiels dans la Communauté (SEC) sont des approches communautaire menées par les Agents de Santé Communautaire (ASC). Elles visent le dépistage et la prise en charge du paludisme, de la diarrhée, de la pneumonie, et de la malnutrition aiguë et modérée chez les enfants de moins de cinq ans (5 ans)

Objectif : Evaluer l'offre de service des ASC dans le district Sanitaire de Kita, Mali.

Matériels et Méthodes : Il s'agissait d'une étude d'évaluation des SEC menées en juillet 2017 dans le District Sanitaire de Kita par la méthode « Lot Quality Assurance Sampling » (LQAS).

Résultats : Plus de moitié (63%) des cas de pneumonie ayant eu recours à la médecine moderne avaient utilisé les services des ASC, et 56% des cas suspectés ayant consulté l'ASC avaient reçu un antibiotique (AB). Trois enfants sur 4 malades de diarrhée qui fréquentaient les centres de santé choisissaient d'utiliser les services des ASC. Un enfant sur 2 de ces malades, avait eu l'association SRO et ZINC pour sa prise en charge (PEC). La qualité de PEC du paludisme par les ASC chez les enfants de moins de 5 ans était meilleure (15%) à celle des autres agents de santé du district

Conclusions : L'évaluation de la qualité de l'offre des services dans la communauté prouve le rôle important des ASC dans l'amélioration de la qualité des soins.

Mots clefs : Soins de santé communautaire ; Agent de Santé Communautaire, Mali.

A06/VIII - DESIGNING EFFECTIVE GRIEVANCE REDRESS MECHANISMS FOR HEALTH

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In line with the global shift towards grievance redress and citizen engagement more countries are opting to implement and scale up their grievance redress systems. In 2014, the Ministry of Public Health in Lebanon initiated work on a comprehensive grievance redress mechanism for the whole ministry. The MOPH aimed to enhance transparency and accountability with the public by ensuring that suggestions and grievances are promptly reviewed and responded. As such, the MOPH set-up multiple uptake channels for grievance including a hotline, mobile application, and website, in addition to taking calls from the MOPH main office. In 2016, and during the implementation of the emergency primary healthcare restoration project at the MOPH, a joint program with the World Bank, the primary healthcare department developed its grievance redress mechanism even further. The PHC department also went beyond passively receiving grievances from the public and actively engaged

beneficiaries through patient satisfaction phone calls, which helped illicit suggestions and grievances. These innovative and cost-effective techniques helped the PHC department achieve its targets for the grievance system and ensure that over 90% of grievances were responded to within the stipulated time-frames. By implementing this grievance system, and according to the World Bank, the MOPH in Lebanon became a benchmark and leader when it comes to grievance redress. Many of the techniques employed by the MOPH for grievance redress are now considered best practices not only at the regional but at the international level as it assisted in enhancing public trust and citizen engagement. This presentation includes all the steps that the MOPH in Lebanon took to implement a comprehensive grievance redress mechanism which are based on international standards and best practices from Lebanon's experience.

A07/VIII - ASSOCIATED FACTORS WITH INTRAPARTUM AND VERY EARLY NEONATAL MORTALITY AT THE MATERNITY OF UNIVERSITY HOSPITAL ?MOHAMMED VI MARRAKECH/CASE-CONTROL STUDY

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Background: Per-partum stillbirth continues to be a burden of public health despite the efforts of countries around the world. This work aims to determine the associated factors with intrapartum and very early neonatal mortality.

Methods: This is a case-control study carried out at the maternity of the university hospital Med VI in Marrakech, where 290 subjects were selected: 145 cases of intrapartum fetal death or a very early neonatal death and 145 controls of surviving newborn weighing 2500 g or more at birth. Data were collected from obstetric records and partogram records for the year 2016. The associated factors were determined by bivariate and multivariate analyzes.

Results: Statistically significant associations were found between these deaths and several factors including: multiparity versus primiparity OR adjusted =2,27 [1,17-4,42], the reference of the women OR adjusted =2,11 [1,12-3,99], and the cares of the patient during the transfer OR adjusted=0,21[0,9- 0,49]. Also the fetal monitoring during labor OR adjusted=0,22 [0,08-0,62], neonatal respiratory distress OR adjusted= 18,48 [7,60-44,98] and the d'APGAR (<=7) score OR adjusted =6,05 [2,51-14,62].

Conclusion: To prevent intrapartum and very early neonatal mortality, more attention should be given to multiparous patients, the referral of patients to another care facility should be timely with adequate health care during the transfer and maternal-fetal monitoring during labor must be rigorous.

IX/ QUALITY RESEARCH

A01/IX - OUTCOMES ASSOCIATED WITH 30 YEARS OF COMMUNITY-BASED RESEARCH PROJECTS IN TEACHING UNDERGRADUATE PUBLIC HEALTH

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Background: Community based research projects have been widely used in teaching public health in many institutions. Nevertheless, there is a paucity of information on the learning outcomes of such a teaching strategy. We therefore attempted to evaluate our experience with such a project based teaching process.

Aims: The objective of this study was to evaluate the factors related to quality, impact and relevance of a 6-9-week student project for teaching public health in the faculty of medicine at Kuwait University. Method: Interactive sessions familiarized students with research methods. Concurrently, they designed and completed a participatory project with a Community Medicine mentor. Questionnaires were used to assess quality, impact and

relevance of the project, and these were correlated with multiple demographic, statistical and research design factors.

Results: More than 500 projects from 1988 to 2018 were evaluated. Three dimensions of outcome were assessed: quality; impact and relevance. The analysis of the relationship between various factors and the scores on each dimension of assessment revealed that various factors were associated with improved quality, impact or relevance to public health practice.

Conclusions: We conclude that use of more objective measurement instruments with better a priori conceptualization along with appropriate use of statistics and a more developed study design were likely to result in more meaningful research outcomes. We also found that a biostatistics or epidemiology mentor improved the research outcome.

A02/IX - RESEARCH AVAILABILITY, GAPS AND FUTURE PROSPECTS WITHIN THE CONTEXT OF ICPD+25 AND SDGS FRAMEWORK IN THE ARAB REGION

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This abstract is from a consultancy report funded through a collaboration between Middle East and North Africa Health Policy Forum (MENA HPF) and the United Nation Population Fund (UNFPA) Introduction

The International Conference on Population and Development (ICPD), held in 1994, brought population growth, reproductive health and related issues to global and national health policy agendas. Today, and according to the regional report on "Implementation Review of the 2013 Cairo Declaration", the Arab World is still lagging behind in achieving the ICPD goals, due to dearth in data and research. This paper aims at identifying research gaps in various ICPD domains, in connection with the SDGs framework, and using the generated information to propose future prospects in research and capacity building.

Methods : A comprehensive literature review was performed using four online databases: Pubmed, Popline, google scholar, and the Index Medicus for the Eastern Mediterranean Region (IMEMR). The search was limited to English published literature in the Arab World and its twenty-two countries, during the period 1994 to 2018, in the five main areas of the ICPD and its subsequent reviews. Three hundred forty-nine studies were retrieved and organized data was classified according to: areas of research, country of reference, year of publication, study type, findings, and implication for further research. Data was synthesized and grouped into the pre-identified themes then analyzed to identify research gaps and the reasons behind them, findings were used to formulate relevant recommendations.

Findings and conclusion : The research concluded that the Arab World is lacking the needed infrastructure and human capacities and identified three types of gaps: according to domain, type of research, and geographical area. The research recommended further research in the following domains: research connecting SDG's 5to4 population growth and family planning, role of men as beneficiaries and change agents, out of school adolescents sexual and reproductive health, and changing pattern of sexual behavior. It also recommended setting a research priority agenda for the Arab world, increasing resources for research; and Arab research inter-country collaborations.

A03/IX - CONTEXT-LED CAPACITY BUILDING IN TIME OF CRISIS: FOSTERING NON-COMMUNICABLE DISEASES (NCD) RESEARCH SKILLS IN THE MEDITERRANEAN MIDDLE EAST AND NORTH AFRICA

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Background: There is a growing epidemiological literature on NCDs in the Middle East and North Africa, which highlights regional characteristics of this global problem, as well as the related challenge for national health systems .Literature on the challenges for healthcare, health systems, and governance is also growing. However, a recurring theme concerns the gap between

health needs and policy response, a situation exacerbated by the lack of national health research frameworks across the region. Hence the need for – and challenge of – research capacity strengthening (RCB).

Objective: The primary purpose of RESCAPMED was to foster methodological skills needed to conduct multi-disciplinary research on NCDs and their social determinants. RESCAP-MED also sought to consolidate regional networks for future collaboration, and to boost existing regional policy engagement in the region on the NCD challenge. This analysis examines the scope and sustainability of RCB conducted in a context of intensifying political turmoil.

Methods: RESCAP-MED linked two sets of activities. The first was a framework for training early- and mid-career researchers through discipline-based and writing workshops, plus short fellowships for sustained mentoring. The second integrated public-facing activities designed to raise the profile of the NCD burden in the region, and its implications for policymakers at national level. Key to this were two conferences to showcase regional research on NCDs, and the development of an e-learning resource (NETPH).

Results: Seven discipline-based workshops (with 113 participants) and 6 workshops to develop writing skills (84 participants) were held, with 18 fellowship visits. The 2 symposia in Istanbul and Beirut attracted 280 participants. Yet the developing political crisis tagged each activity with a series of logistical challenges, none of which was initially envisaged. The immediacy of the crisis inevitably deflected from policy attention to the challenges of NCDs.

Conclusions: This programme to strengthen research capacity for one priority area of global public health took place as a narrow window of political opportunity was closing. The key lessons concern issues of sustainability and the paramount importance of responsively shaping a context-driven RCB.

A04/IX - ASSESSMENT OF THE QUALITY OF PRIMARY HEALTH CARE AT THE LEVEL OF THREE PRIMARY HEALTH CARE CENTERS IN NABEUL

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Quality of care is a priority of health systems that seek to improve the efficiency and effectiveness of care provided at the hospital level as well as at the level of primary health care facilities. In this sense, the WHO EMRO has proposed a list of indicators to use to assess the quality of primary care. The aim of our study was to assess the quality of primary health care

Methods: Using the list of 34 indicators developed by WHO, we have looked at the different dimensions of quality of care (accessibility, safety, efficiency, effectiveness, patient centeredness, timeliness) It is a descriptive and evaluative study including cross-sectional, retrospective surveys in three primary health care centers (PHCC) in Nabeul between 2016 and 2017.

Results: Out of the three PHCC, 17% of the population served was registered. The reference rate at the second level of care was 19%. 69.5% of pregnant women had their first visit in the first quarter and 52% had at least 4 perinatal consultations. The average waiting time was 114 minutes. For effectiveness of chronic disease management, only 19.6% of diabetics were balanced and 62.6% of hypertensive patients had a controlled hypertension. None of the patients had a cardiovascular risk assessment or anti-smoking advice. Compliance with hand hygiene was noted in 62% of acts.

Conclusion: The quality of care remains a difficult concept to measure which seems satisfactory in certain aspects and is suffering from weaknesses requiring corrective actions in other aspects hence the importance of its continuous evaluation to ensure its improvement.

A05/XI - RESEARCH BY MEDICAL STUDENTS: NEED TO BE ALIGNED TO NATIONAL AND REGIONAL PRIORITIES

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Background: Research is a mandated core principle in Kuwait University. In Kuwait University Faculty of Medicine (KUFOm), the only medical school in Kuwait, students are introduced to research during their penultimate year via a mandatory community medicine project. The study aims to identify the research profiles of KUFOm students as well as their attitudes and perceived barriers towards research conduction.

Methods: A questionnaire was distributed to a stratified random sample of 300 preclinical and clinical year students in KUFOm. The questionnaire assessed each student's socio-demographic and research profile. Every student's attitudes and perceived barriers towards research conduction were assessed via a 5-point Likert scale.

Results: Most students recognize the importance of conducting research in the medical field (96%), during medical school (88%), and for residency program applications (60.5%), with 76% aiming to conduct research during medical school. However, only 20% of students have worked on extracurricular research, 80% of which being only one project, mainly by preclinical students (82%). Most of these research opportunities were obtained via personal efforts (57%). A minority have published their work (18%) and received awards (14%). Inadequate time was the most reported barrier to conducting research (83%). Other barriers included lack of organized means to access/obtain research opportunities (59%), lack of skills/knowledge (52%), difficulty accessing a supervisor (51%), lack of incentives (49%), inadequate facilities (46%), and lack of support from faculty members (44%). Moreover, 49% of students were ever encouraged to pursue research from faculty members. Most students recommend implementing research teachings in the preclinical curriculum (71%) and an obligatory preclinical research project (52%).

Conclusion: Most medical students in KUFOm have a keen interest in research, understanding its importance in the advancement of medicine and their own careers. Advancing the research curriculum in KUFOm, including addressing the barriers to research that students face, is warranted.

A06/IX - WHAT DID PATIENTS FEEL ABOUT CARE THEY RECEIVED IN MOROCCO?

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Online feedback from patients about their experiences of health services is increasing and likely to accelerate in the coming years. We conducted this first qualitative study in Morocco to find out what patients felt about care they received.

We chose city of Casablanca as it is the biggest urban area in Morocco, has the highest density of doctors and extensive availability of physician ratings from the Internet.

We collected data from Google reviews, which has a stiring system with possibility of free text commentary. We included public and independent establishments registered at the Regional Medical Council of Casablanca.

4 investigators were involved in the study. 3 were blinded to the source of the feedback.

Feedbacks were based on Reader et al (1) classification that included 7 classes: quality, security, administrative, waiting time, communication, humane and patient right.

929 feedback were collected from 118 establishments between 2016 and 2018. Only 664 included commentaries. 54% were satisfied with the care they received. They mainly praised issues related to quality (44%) and communication (22%). However, 32% of patient were dissatisfied and were concerned mainly about issues related to administration (35.6%), security (17.8%) and communication (15.3%).

This study revealed patients' interests and concerns related to their care. While, we should be prepared for more online patients' feedback, this study highlighted issues healthcare professionals in Morocco should address to ensure quality care

(1) Reader et al: Patient complaints in healthcare systems: a systematic review and coding taxonomy. *BMJ Qual Saf* 2014;0:1-12

Funded by For Better Health

X/ SRH AND MATERNAL/CHILD HEALTH

A01/X - PARENTS' PERCEPTIONS ABOUT CHILD ABUSE AND THEIR IMPACT ON PHYSICAL AND EMOTIONAL CHILD ABUSE: A STUDY FROM PRIMARY HEALTH CARE CENTERS IN RIYADH, SAUDI ARABIA

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Background: To determine perceptions of parents about child abuse, and their impact on physical and emotional child abuse.

Methods: 200 parents attending 3 primary health care centers, Riyadh, they were requested to participate in a survey. Data was collected by self-administered questionnaire. 5 main risk factors domains were explored; 3 were parent related (personal factors, history of parents' childhood abuse, and parental attitude toward punishment), 2 were family/community effects and factors specific to the child. Descriptive analysis were used to test for statistical significance, and regression analysis performed to explore relationships between child abuse and various risk factors

Results: 34% of the parents reported a childhood history of physical abuse. Almost 18% of the parents used physical punishment. The risk factors associated with child abuse were parents' history of physical abuse, young parent, witness to domestic violence, and poor self-control. Child-related factors a child who is difficult to control. Parents who did not own a house were more likely to use physical punishment. Abusive beliefs of parent: physical punishment as an effective educational tool for a noisy child; it is difficult to differentiate between physical punishment and child abuse; parents have the right to discipline their child

Conclusion: The causes of child abuse are complex. Detecting child abuse may be difficult in primary care, many risk factors can be identified early. Parents' attitudes can be measured, prevention initiatives, such as screening and counseling for parents of children at risk, can be developed into primary care.

A02/X - THE IMPACT OF SOCIO-ECONOMIC AND HOME ENVIRONMENTAL FACTORS ON ORAL HEALTH- RELATED QUALITY OF LIFE AMONG CHILDREN AGED 11-14

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Introduction: Oral diseases are linked to negative consequences on physical, functional, emotional well-being, and can affect quality of life adversely. **The aim** of the study is to assess the oral health related quality of life (OHRQoL) and to explore socio-demographic, -economic, and -environmental factors that are associated with OHRQoL among a sample of children aged 11-14 in Saudi Arabia

Methods: A cross-sectional design was used. Data were collected by self-administered validated standardized questionnaire addressing OHRQoL, the Child perceptions questionnaire (CPQ) designed to assess four domains: oral symptoms, functional limitations, emotional and social well-being. In addition, data was collected on home environment, socioeconomic/demographic characteristics and oral hygiene practices of participants and their parents or adult guardians. Univariate descriptive statistics, spearman's correlation, Kruskal-Wallis H and Mann-Whitney tests were used. Data were analyzed using SPSS 23 Software. Significance was at $p < 0.05$

Findings: In total, 534 children participated in the study (91% response rate), of which 60% were females. Twenty percent of children described their oral health as "poor" and one in every four children reported their oral health had at least some effect on their overall well-being. Children who were male, attending public schools, living with both parents were more likely to report poor OHRQoL

Conclusions: The results identified potential predictors of OHRQoL. Disparities in OHRQoL exist between certain sub-populations. Active efforts and local interventions are necessary to improve OHRQoL.

A03/X - STATE OF MATERNAL AND NEONATAL HEALTH IN TUNISIA

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Introduction : The programs and strategies succeed each other in maternal and newborn health, despite maternal health indicators improvements , Tunisia has not been able to achieve the objectives set (MDGs 4 and 5), mainly for the maternal death ratio, around 45 instead of 19/100000 live births. A maternal and neonatal health situation is needed for an inclusive maternal and neonatal health promotion strategy.

Methods : With support of an international expert, and after consultation with various stakeholders, partners and national adept, a literature gathering (maternal and neonatal health strategies and programs) an analytic situation was implemented, and validated by a national workshop. This work was concretized by a national document expressing the vision and expectations of a new maternal and neonatal health context in Tunisia.

Findings : In spite of a certain availability of structures, of human, technical and technological resources: the third level of care is congested, the second level is manhandled and the first level is neglected. The private sector escapes of effective regulation and consent. Regional and social inequalities are obvious. The data and the collection system are partitioned besides a poor care social security.

Conclusion : An agreement on the state of play between actors and decision-makers is the ultimate condition for progressing with greater clarity. The current context requires a planned maternal and neonatal health strategy, which is proof of the real.

A04/X - SEASONAL INFLUENZA VACCINATION: KNOWLEDGE, ATTITUDES AND BEHAVIORS IN PREGNANT WOMEN AND HEALTHCARE PROFESSIONALS - MOROCCO, 2018

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Background: Influenza is a public health problem with high risk of severe disease for pregnant women (PW). The objective of the study was to assess the acceptability of seasonal influenza vaccine (SIV) and to identify its determinants through a study on knowledge, attitudes and behaviors among PW and health care professionals (HCP) in contact with PW in Morocco.

Methods: We conducted a cross-sectional study in a convenience sample of PW and HCP at 31 primary health centers within three provinces of Morocco. Data were collected using two structured questionnaires. Descriptive and analytical statistics were performed using Epi info 7. The statistical significance level was set at $p < 0.05$.

Results: We included 1152 and 139 for HCP. Identified factors supporting the acceptance of PW to receive SIV were the availability of safety information on SIV (OR = 1.96, 95% CI: 0.99-3.89), the HCP as source of this information (OR = 2.55, 95% CI: 1.61-4.04) and the fact that the SIV is recommended by a HCP (OR = 3.17, 95% CI: 2.12-4.74). Adverse events following influenza immunization were a barrier to receive SIV for PW (OR = 0.38, 95% CI 0.19-0.78). Contributing factors to a prior SIV recommendation to PW by a HCP were history of influenza vaccination of the HCP (OR = 5.06, 95% CI: 1.08-23.61) and awareness by the HCP that the SIV is recommended for PW (OR = 26.00, 95% CI: 3.28- 205.85).

Conclusions: The national SIV communication strategy should consider determinants identified to make PW adhere to SIV.

This abstract was supported by the Cooperative Agreement Number IP820 funded by the US Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the US Centers for Disease Control and Prevention or the department of Health and Human Services.

A05/X - SOCIAL DETERMINANTS OF LOW BIRTH WEIGHT IN LOW AND MIDDLE INCOME COUNTRIES (LMICs): A SYSTEMATIC REVIEW OF THE EVIDENCE

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Introduction: Evidence on the socioeconomic status (SES) determinants of poor birth outcomes is scarce in LMICs. We conducted a systematic review to examine the quality and strength of the evidence on the SES determinants of low birth weight (LBW) in LMICs.

Methods: Our systematic search strategy, designed to capture studies on poor birth outcomes published between 2000 and 2014 in four databases, yielded 3,403 English-language articles. Of those, 273 articles were included after reviewing the abstracts against strict criteria, 65 of which were on LBW. We utilized a checklist adapted from the Newcastle-Ottawa quality assessment tool to grade the 65 full-text articles; 25 articles were excluded due to poor quality and 40 full-text articles were further analyzed.

Findings: The majority of the studies (n=34,85%) come from middle income countries and only 6 (15%) come from low income countries. The majority used maternal education as one of their main SES measure (n=36), followed by wealth (n=22), maternal occupation (n=11), paternal education (n=5), and paternal occupation (n=3). The evidence on the association between maternal education and LBW was not strong, with only 14 studies out of 36 showing negative association. The evidence was stronger for wealth having 10 out of 22 studies showing negative association with LBW.

Conclusion: Contrary to expectations, maternal education showed a negative association with LBW in less than half of the studies. This highlights the importance of conducting more studies that are methodologically rigorous to better understand the relation between poor birth outcomes and SES in LMICs.

A06/X - EVALUATION DE L'IMPLANTATION DU SYSTEME DE SURVEILLANCE DES DECES MATERNELS ET REPONSE DANS 5 PAYS DE LA REGION ARABE

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Context: In some countries in the Arab region, maternal and neonatal mortality are major problems. Policymakers need an approach that produces information that gives both the number of deaths and the circumstances of occurrence of those deaths. From this diagnosis will result a consensus on the specific measures to be taken and how to implement and monitor their implementation with the contribution of health professionals at all levels. WHO, UNFPA recommend MDSR approach because it responds well to these characteristics. As many countries have implemented this approach, our main concern is to assess their implementation and challenges that faced in order to set recommendations for the region.

Methods: The study took place in 5 countries: Egypt, Sudan, Jordan, Tunisia and Morocco. Following WHO guideline. The team researcher adapted questions, to explore 4 essential components: a / Analysis of the maternal health situation in the country, b / MDSR policy and strategy, c / MDSR governance (Mainly stakeholder participation and legislation), d / the MDSR process (Declaration, notification, review, analysis, dissemination, use, response and monitoring evaluation) [2]. 12 grids were developed, information was gathered through

available documents and reports as well as interviews with various stakeholders in the country and field visits. Each country team developed a preliminary report that was first discussed with the country team and in a regional workshop. All material was posted in one site to be visible to all participants and countries [4].

Results :

- All countries implemented MDSR following Guidelines developed by WHO with contextual adaptations.
- We note an under-reporting of deaths due to the low coverage of the rural population by the civil registration, the low commitment of some university hospitals and difficulty to get information from the private sector
- The notified deaths by MDRS system is higher than the number of deaths provided by the routine system but they are not all reviewed
- For all countries, financial shortage represents a real threat for ensuring review committee's meetings as well as development and production of MDSR reports;
- Direct cause death rates are similar to those reported in the literature: six to eight out of ten women die from direct causes, particularly hemorrhage, eclampsia / pre-eclampsia and sepsis;
- High rates of avoidability for the five countries, at least seven out of ten women deaths could have been averted. Avoidability factors are related to the place of death. Thus, in case of institutional MD, health service-related factors prevail, whereas for home-based MD, family and community-related factors are predominant factors.
- None has a clear and targeted dissemination strategy to allow a real timely use of data.; Access to MDSR data is not systematic
- Delays in the report's production (6 to 24 months); the reporting frequency of MDSR results are not planned.
- Despite the recommendations are translated into an action plan for some countries, very often they do not allow regular monitoring as they are not time-bound and there is no M&E indicators set ahead to measure change.

Conclusion: The identification of the barriers to and the facilitators of the implementation of maternal death reviews is an essential step for the future adaptation of this method in countries with low resources, we notified that: MDSR has been globally implemented but with varying degrees of political priority, allocated resource governance and processes. A High-level commitment supported by the legislative and legal framework is still needed. The MDSR is a complex health system strengthening process that takes time to complete the continuous action cycle." There is a gap between the notion of surveillance and the notion of response: Need to strengthen the response component of MDSR. MDSR is fragile approach and is incompletely integrated into the maternal health programs

XI/ PUBLIC HEALTH IN THE ARAB WORLD

A01/XI - PUBLIC HEALTH WORKFORCE IN THE ARAB WORLD: READY TO EMBRACE THE CHALLENGE?

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The Arab World is passing through unprecedented health challenge contingent upon social, economic and political turmoil. Health systems are at cross-roads and the burden on the health workforce is enormous. The aim of this review is to revisit readiness of the public health workforce to match the health situation in the region. A four-dimensional conceptual framework consisting of education, practice, research, and networking is adopted to support analysis and recommendations. The methodology is based on systematic literature review and author's experience.

Despite growing educational potential, the region lacks robust frameworks that ensure Comprehensive multidisciplinary public health education, inculcation of leadership and image, competency-based approach, and mastery of social and political

skills. Public health practice is second class with poor career trajectories, largely dichotomous and inadequately responsive to needs and emergencies. Research on public health is generally meager, less rigorous and lacking organizational and human capacity. Absence of robust public health associations reflects the weak networking, and lack of multidisciplinary assembly and championship. These realities jeopardise realisation of a critical mass of quality public health workforce.

The situation in the Arab World with inequities in health, rising exposure to health risks, conflict and complex emergencies, increasing health care costs, and quality concerns warrants a strong public health leadership and calls for "a fit-for-purpose" public health workforce. Transformation across public health education, practice, research and networking is highly needed. This paper suggests detailed interventions along those lines and posits that the formation of a pan-Arab Public Health Association would bring in much value.

A02/XI - THINKING OUT OF THE BOX FOR PUBLIC HEALTH SERVICES IN SAUDI ARABIA

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Saudi Arabia has witnessed a significant improvement in its health indicators. The kingdom has spent generously on the curative health services and established hundreds of hospitals and primary health care centers. However, we believe that this huge health expenditures and the presence of curative services is not the only reason for this improvement. Public health services have also had a significant impact on people's health and that this improvement is due to a combination of public health programs such as immunization, environmental sanitation and health education with good formulation of sound health policies and health delivery systems. It is noted that health plans and expenditure in the health system are concentrating on the curative aspects and there is a significant weaknesses in public health services. Additionally, most jobs are allocated for curative care and there is scarcity of job titles related to public health in the health structure, such as public health officers, public health inspectors and public health specialists. A suggested body namely, Ministry of public health, will work to confirm that all issues related to health of the public in every aspect of daily life in the kingdom are within the genuine interest of all policy makers.

A03/XI - CHALLENGES FACING BACHELOR PUBLIC HEALTH STUDENTS IN SAUDI ARABIA - ONLINE SOCIAL LISTENING REPORT

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Introduction: Bachelor degree public health (PH) education in Saudi Arabia (SA) is provided by applied medical science colleges and schools of PH. The produced workforce faces multiple challenges reported in the literature and observed in work outcomes.

In 2015, an Arabic PH vlog ,Marwah Hassounah (MH), started online interaction through Snapchat, YouTube, e-mail, and Twitter. MH developed insight into the challenges facing bachelor degree PH students in SA. This poster aims to highlight the results of this social listening .

Methods: On November 13, 2017, MH revised all comments on the vlog from YouTube and inbox messages on Snapchat. Inclusion criteria was text that implicitly or explicitly indicated that its owner is a student or graduate of bachelor of PH from SA. Also, the text should express challenges that the person is facing.

Results: 168 YouTube comments and 37 Snapchat messages were reviewed, from which 14 and 10 met the inclusion criteria respectively. The two most common challenges were understanding the speciality, and career future and salary inquiry. Other concerns were professional classification, personal challenges with scientific research, improving english

language skills, knowing about PH conferences in the kingdom, and need for advice for the internship year.

Conclusion: The main challenges found are lack of understanding of PH and PH specialists' career paths in SA. We recommend conducting qualitative research on students to better understand the problem, increasing efforts towards student guidance, and building professional capacity.

XII/ OPENING THE DOORS HUMAN RESOURCES & TRAINING

A01/XII - COMMUNITY HEALTH NURSING SERVICE IN OMAN: CHALLENGES AND ACHIEVEMENTS

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Background and Purpose : Community Health nursing is one of nursing specialties that been valued for its role in providing care in variety settings in community. Ministry of Health in Oman has further focus on establish and expand community health nursing service to cover especially rural areas to move care closer and deeper into the community as well as to prevent extra expenses on admissions in to tertiary care institutions.

Methods : Patients who are found do not meet the criteria for admission, are referred back to the physicians for further interventions. However, those who are meet the admission criteria, are admitted into the service and individualized patient and family centered care that is culturally oriented are delivered to them in their home. Community health nurses (CHNs) receive different types of cases including but not limited to hypertension, diabetes, cerebrovascular...etc.

Results : The role of CHNs focuses on the community as a client. This requires advanced knowledge, skills and competencies that enable these nurses to practice different roles that has been assigned to them such as an advocate, a health educator and a community organizer.

Conclusions : Recently, more healthcare programs were integrated into the community health services in Oman. These programs included the elderly care and palliative care. Two training workshops were conducted Basic and Advanced on palliative care by Oman Cancer association, where good number of community nurses were included and then sent back to their clinical areas with action plans, to formulate Palliative care working teams within their Governorates.

A02/XII - ATTITUDES OF MEDICAL TRAINEES IN OMAN TOWARDS INTER-PROFESSIONAL COLLABORATION: A CROSS-SECTIONAL STUDY

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Introduction: Increased standard of living and rapid urbanization have led Oman to witness a rising tide of complex life limiting diseases. This implies that the country requires a multidisciplinary approach to come to grips with these challenges. This study aimed to investigate attitudes towards Inter Professional Collaboration (IPC) among medical trainees in Oman. It also examined the relationship between sociodemographic variables and indices of IPC.

Methods: A cross-sectional study was conducted among medical trainees, enrolled in the Oman Medical Specialty Board (OMSB). The Jefferson Scale of Attitudes towards Physician-Nurse Collaboration (JSAPNC) was used to determine the effect of gender on different aspects of IPC.

Findings: A total of 247 medical trainees consented to participate in the study (response rate= 88%). Male trainees endorsed more favorable attitude towards IPC in composite scores of JSAPNC compared to their female counterparts. Through linear regression modelling, we found that previous

exposure to ICP played a significant role in participants harboring a favorable attitude towards IPC.

Conclusions: This study will lay the groundwork for soliciting IPC in countries that are increasingly witnessing patterns of diseases and demographic trends that require multidisciplinary intervention. Our study suggested that females tend to hold a less favorable view of IPC and that prior exposure can invariably influence favorable attitude towards IPC. This study also speculates the importance of socio-cultural factors in explaining gender difference towards IPC.

A03/XII - MOTIVATION AU SERVICE PUBLIC ET PERFORMANCE AU TRAVAIL

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La performance hospitalière des services publics est inéluctablement liée à son capital humain. En effet, ce capital puise sa force dans la motivation et l'engagement pour pouvoir accompagner son développement organisationnel, social et économique. Depuis plusieurs décennies, les chercheurs en gestion des ressources humaines se préoccupent singulièrement des facteurs de la motivation au service public, ainsi que sa relation avec la satisfaction au travail et l'environnement organisationnel. En s'appuyant sur une étude descriptive corrélative, faisant appel à des outils quantitatifs et qualitatifs pour la collecte des données. D'un côté, l'étude a identifié les facteurs de motivation de service public, de l'autre, a mesuré le niveau de cette dernière chez les professionnels de santé publique, ainsi que la force de corrélation. D'une part la variable dépendante, la MSP a été évalué, avec l'instrument de Vandebeele, d'autre part, la variable indépendante qui est la performance des ressources humaines dans un contexte public, a été évaluée par un instrument élaboré par Alexandra Simon, Amar Fall et David Carassus. Pour la rigueur de la recherche, des considérations éthiques ont été retenues, à savoir l'accord du comité d'éthique.

Les résultats des analyses montrent une corrélation significative de $r = .46$ ($p < .05$) entre la MSP et la confiance organisationnelle chez les médecins (généralistes et spécialistes), ainsi entre la confiance organisationnelle et le climat organisationnelle de $r = .35$ ($p < .05$). En outre, une corrélation significative entre la MSP et la satisfaction au travail de $r = .26$ ($p < .05$) chez les infirmiers et techniciens de santé. Quand aux administrateurs, les résultats font apparaître qu'il y a corrélation significative entre la MSP et le climat organisationnelle de $r = .57$ ($p < .05$). L'étude discute les résultats à la lumière de la théorie Perry et Wise et celle de Moynihan et Pandey.

mots clés: Motivation au service public, performance au travail, RH, hôpital

A04/XII - EVALUATION DE LA SATISFACTION DES PATIENTS AU CHU

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Introduction : L'intérêt porté à la qualité des soins n'a cessé de croître ces dernières années dans les pays développés et aussi dans certains pays en développement car les patients sont aujourd'hui des partenaires actifs des soins. L'objectif de ce travail était d'évaluer la satisfaction des patients hospitalisés au centre hospitalo-universitaire d'Oran.

Matériel et méthodes : Nous avons mené une étude prospective de 15 jours auprès de deux échantillons de onze services hospitaliers tirés au sort pendant les périodes octobre-novembre 2017 et décembre-janvier 2018. Un questionnaire anonyme multidimensionnel, traduit dans les deux langues arabe et française a été administré aux participants par les externes en stage au service d'épidémiologie. Uniquement les patients déclarés sortant le jour de l'enquête ont été inclus. Le niveau de satisfaction a été mesuré par la construction de scores thématique et global.

Résultats : Nous avons inclus 198 patients. L'âge moyen des patients était de $35,74 + 21,4$ ans et les enfants < 05 ans représentaient 12,1 % des cas. Les patients avaient un niveau secondaire dans 54% et universitaire dans seulement 8,6%. Le score global de satisfaction était de 56,7%. Il variait significativement selon le sexe ($p < 0,03$), les classes d'âge ($p < 0,01$) et les services ($p < 0,001$). Les scores pour l'accueil et le soutien psychologique étaient respectivement de 69,3% et 67,2%.

Conclusion : L'évaluation de la satisfaction est peu fréquente et non obligatoire dans nos établissements de soins. Le score global obtenu de satisfaction qui variait significativement selon le secteur d'admission, peut être amélioré si des mesures correctives sont entreprises.

XIII/ COMMUNICABLE DISEASE PREVENTION & MANAGEMENT

A01/XIII - EPIDEMIOLOGY OF VIRAL HEPATITIS C IN CASABLANCA-SETTAT REGION; MOROCCO; 2012-2016

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Introduction: Chronic hepatitis C infection is a major public health problem. Given the lack of a surveillance system of viral hepatitis in Morocco, limited information is available on this issue. We aimed at providing a descriptive epidemiology of HCV infection in Casablanca-Settat region (CSR) with a focus on HCV genotype distribution

Methods: We performed a descriptive retrospective study of HCV-positive treated patients in CSR hospitals between 2013 and 2016. We collected epidemiological information from medical records of 524 treated patients at 17 hospitals across CSR. The statistical data were analyzed using Epi-info statistical software

Results: the sex ratio was predominantly female (2.4), the median age of patients was 62 years old and individuals aged more than 40 years represented 95 % of our population. 61% of patients were naïfs, and 3% were in treatment failure. Genotype 1 was predominant (52 %) followed by genotype 2 (43 %). Subtype 1b was the most frequent (62.7%), followed by 2 a/c (24.12%). In terms of co-infections, 3% patients were affected by HIV and 2 % by HBV. 85% of patients reported exposure to one or more risk factors for HCV infection, dental procedures was the most frequently reported (50.5%) followed by surgery (36.3%) and hospital admission (12.6%). 3% of the patients reported a history of intravenous drug abuse.

Conclusion: Genotype 1 was predominant and nosocomial exposures were the most way of HCV transmission reported. This study suggest that focusing on medical practices and infection control in health facilities is essential for HCV transmission prevention.

A02/XIII - EPIDEMIOLOGICAL SURVEILLANCE OF COMMUNICABLE DISEASES IN TUNISIA(1995-2017)

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Background and objectives: The epidemiology of communicable diseases has undergone rapid changes given the emergence and re-emergence of certain diseases internationally, such as in Tunisia. The aim of this work was to describe the epidemiological profile of communicable diseases over a 20-year period.

Methods: This was a retrospective cohort study. Data collection was done by the epidemiological surveillance system. The SPSS 22 software did data capture and analysis.

Main Results: During the study period, the incidence of tuberculosis decreased significantly between 1995 and 2003 and increased from 19.7/100000 to 29/100000 inhabitants between 2008 and 2017. The incidence of meningitis did not change significantly. The incidence of hepatitis, all forms combined, has decreased since 2000. The incidence rate of typhoid fever has been stable at an average of 0.88 per 100000 inhabitants since 1997. The brucellosis's incidence has not been marked by significant variation since 1995. A stable incidence of cutaneous leishmaniasis was observed during the study period with an average of 23.69/100000 inhabitants. For the incidence of visceral leishmaniasis, it increased significantly between 2013 and 2015 ($p < 10^{-3}$).

Conclusion & Recommendations: Tunisia is called upon to promote its system of epidemiological surveillance and its capacity to fight communicable diseases, particularly emerging ones. Its main surveillance system, the notifiable disease system, with significant underreporting, needs to be updated and strengthened.

A03/XIII - CHLAMYDIA SCREENING IN PRIMARY CARE: LESSONS FROM EUROPE

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Introduction: After the Alma-Ata Declaration on primary healthcare (PHC), various calls have been made for the need for sexual and reproductive health services (SRHS) to be delivered through PHC. Forty years after Alma-Ata, and under the frame of the Astana Declaration, the objective of this review is to identify current uptake of Chlamydia screening (UCS) as a SRHS integrated in PHC settings of the WHO Euro region.

Methods: A two-step search of electronic databases: OVID Medline, EMBASE, Maternal and Infant Care and Global Health. Studies included were published from January 2001 to May 2018 in any European language.

Results: A majority of the evidence cites the United Kingdom model, followed by the Netherlands, Denmark, Norway, and Belgium. Men may have a lower UCS compared to women. When both genders were reported together, the lowest acceptability was 9.5% in the Netherlands. Denmark presented the highest percentage of people who tested in a PHC setting (87.3%).

Conclusion: Not all countries have adopted the term 'integration' in health care, making it difficult to generalise research results. Different health systems may influence UCS in PHC. The use of the "effective screening rate" is suggested to homogenise reporting. There is very little evidence on integration of SRHS such as chlamydia screening in PHC and there are gaps between European countries. Further research in this area is greatly supported.

A04/XIII - LESSONS FROM THE 2015 CHOLERA EPIDEMIC IN BAGHDAD

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Introduction: Baghdad suffered a Cholera epidemic from the 1st June 2015 to 1st December 2015. Al-Yarmouk Teaching Hospital (AYTH), the second main hospital in Baghdad, is close to the area where the epidemic started and reflected the status of the episode.

Methods: Clinical and sociodemographic data were retrieved from the hospital records and shared with the WHO Regional Office in Iraq to contribute to the official epidemic statistics. The population included adult patients admitted to AYTH, confirmed with Cholera by the Central Public Health Laboratory (CPHL).

Findings: The earliest confirmed cases were 87 patients from the belt zone (44.16% of hospital cases), from which 65 were dependent on neighbouring farmers to consume agricultural products contaminated with Inaba Vibrio Cholera. The outbreak

extended to a sum of 940 patients in Baghdad, 197 (21%) attended AYTH. With only two deaths reported in AYTH during this outbreak, the mortality rate was low.

Conclusion: Results may underestimate the real number of cases as many are diagnosed outside the CPHL. Future data collection should rely on more laboratories to generate more accurate results.

A likely explanation to why the epidemic started at Baghdad belt area is that this population depends on farming watered by the river. In the summer of 2015, the river water supply was closed from reaching Baghdad. Farmers had to use well water for drinking and farming. This reflects the need to constantly test "well" water and to supply safe drinking water and toilet facilities for high-risk groups such as farmers.

A05/XIII - CHOLERA OUTBREAK IN MAYFA ANS DISTRICT, DHAMAR GOVERNORATE, YEMEN, NOVEMBER 2018

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Introduction: Yemen is currently facing the third wave of cholera epidemic. On November 10, 2018, the surveillance officer of Dhamar governorate notified increased number of acute watery diarrhoea from Mayfa Ans district. On 11th November a team from Y-FETP was sent to investigate. The aims are to determine the magnitude of the outbreak, the mode of transmission, identify risk factors and recommend preventive measures.

Methods: We conducted a descriptive and case control study. WHO case definition was used with active search from house to house. A pre-structured questionnaire was used. Stool samples and water samples were collected and sent to reference lab. Epi info 7 was used for analysis P Value < 0.05 was the significant cutoff point.

Findings: A total of sixteen cases met the case definition, 62% of cases were females. The overall attack rate was 2.2 /10,000, with no fatality. All stool samples were positive by cholera rapid diagnostic test and faecal Coliform was isolated from water samples. The identified risk factors were poor latrine status (OR 4.3, 95% CI: 1.1- 16.2), contact with other infected person (OR 4.2, 95% CI: 1.1- 16.5), eating uncleaned guava fruit (OR 14, 95% CI: 1.5- 134.3).

Conclusions: Chorea outbreak was confirmed in Mayfa Ans district of Dhamar governorate. Poor sanitation, personal hygiene and contaminated food were the risks factors. Increased a community awareness towards hand washing, personal hygiene, chlorination of water and washing fruits before consumption are highly recommended.

A06/XIII - SEROPREVALENCE AND RISK FACTORS FOR LEPTOSPIROSIS AMONG HIGH-RISK PROFESSIONALS CASABLANCA, MOROCCO 2014 ?

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Background: Leptospirosis is a bacterial zoonosis of public health concern worldwide associated occupational activities. This is a first study conducted in Morocco with an objective to determine the seroprevalence of leptospira among high-risk groups and to identify their risk factors.

Methods: We conducted a cross-sectional study in three sites. Sera were collected during February 2014 from 209 professional volunteers in the municipal slaughterhouse, 125 in a poultry market and 155 in the port of Casablanca and tested by both ELISA (IGM, IGG) and the Microscopic agglutination test (MAT) with a cut point of 1:50. Information on risk factors including personal data, place of residence, clinical history, potential exposure and preventive measure use were recorded in a questionnaire.

Results: The seroprevalence considering a seropositivity by either ELISA or MAT was highest among poultry workers (23.73%) than in fishing workers (11.49%) and abattoir workers (6.21%) (?= 19.93, P<0.0000). 10 serovars were identified (7 icterohaemorrhagiae , 1 australis , 1hardjobovis , 1 non identified).

In the multivariate analysis by logistic regression only a specific place of residence from all the city was found independently associated with seropositivity by either ELISA or MAT (p=0.02). Most of the serovar icterohaemorrhagiae were identified in subjects from a particular professional category (poultry peelers) living in this specific area located near the poultry market.

Conclusions: This study demonstrated that poultry market workers were at substantial risk of exposition to leptospirosis because of bad hygienic conditions and presence of rodents in both their workplace and their place of residence. Preventive measures should be taken by local authorities targeting high risk area

Keywords: leptospirosis, high risk work, seropositivity, ELISA, MAT, Morocco

A07/XIII - EPIDEMIOLOGICAL, CLINICAL AND BIOLOGICAL PROFILE OF MENINGITIS IN SETTAT PROVINCE- MOROCCO, 2014-2018.

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Introduction: In Morocco, meningitis occurs in sporadic, endemic or epidemic status. In 2016, the national incidence of meningitis was 2.85/100,000 inhabitants, and the incidence of meningococcal meningitis was 1.8/100,000 inhabitants. The objective of this study was to describe the epidemiological, clinical and biological profile of meningitis in the province of Settatabetween 2008- 2018.

Methods: We performed a descriptive analysis of meningitis case series notified through the meningitis provincial epidemiological surveillance system to the Settata Epidemiology Unit between January2008 and October 2018. Data analysis was performed by Epi-Info 7 at 95% confidence level.

Results: A total of 392 cases were analyzed. The median age was 7 years,with an interquartile range. The age group 5-15 years was the most affected, representing 30% of cases. The sex ratio M/F was 1.6:1. Meningococcal meningitis accounted for 48% of cases. The incidence rate was 5.8 per 100,000 populationswith a stable overall trend. We observed a seasonal variability in the distribution.In children under 5 years,vomiting and neck stiffness were observed in 50% and febrile seizures with impaired consciousness in 12%. Purpura has been seen in different age groups over 3 months. The cerebrospinal fluid was turbid in 48.3% of cases. The biological confirmation rate was 29%. Average Case Fatality Ratio was 10.3%.

Conclusion: The high incidence of meningitis in children suggests infant immunization is either not done or not preventing transmission to unvaccinated persons.These findings highlight the importance of strengthening provincial surveillance and building sustained laboratory diagnostic capacity for meningococcal disease confirmation.

Key words: Meningitis, case series, descriptive analysis, Settata province

A08/XIII - NATIONAL VOLUNTEER STOP TRANSMISSION OF POLIOMYELITIS(NV- STOP) DATA ANALYSIS REPORT, YEMEN, 2016-2017

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Background: Surveillance: Is an ongoing systematic collection, analysis and interpretation of health data for action. National

Volunteer Stop Transmission Of Poliomyelitis: providing actual time community reporting, and detect the first suggestion of health emergency.

Method: Data collection was scheduled to start in the second week August, 2018. We obtained data by review of existing documents and registers from mid February 2016 to 30 December 2017. this data include demographic, notification and CBVs data.

Results: 175 districts in 9 governorates with 5489 volunteers with total coverage 73% in 2016 and 44% in 2017, Peak of occurrence was at December 2016 (10%) and in May 2017 (9%), (47.4%) were males and (37.3%) were females and (15.3%) not reported. The majority of cases were in 2016 (63%). In age group 1-< 5 years, most of cases were males (15%) in 2016. Saadah governorate is more effected (17%) in 2016 mostly males, and in Taiz (10%) in 2017 mostly females. The majority of CBVs were males (74%).

Conclusion: The total coverage of NV-STOP in targeted nine governorates was two third more in 2016 than in 2017, Peak of occurrence of cases were at December 2016 and in May 2017 .Total males were more than females. The majority of cases were in 2016. In age group 1-< 5 years, most of cases were males in 2016. Saadah governorate is more effected in 2016 mostly males, and in Taiz is more effected in 2017 mostly females. The majority of CBVs were males

A09/XIII - INVESTIGATION OF A FOODBORNE-DISEASE OUTBREAK IN A PRIMARY SCHOOL, MARCH 2017, TUNIS, TUNISIA

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Introduction: On 18 and 19 March 2017, students of OKBA 2 School in Tunis governorate presented to the emergency unit of the district hospital with complaints of abdominal pain, vomiting and diarrhea. A foodborne-disease outbreak was suspected. In collaboration with the regional directorate of health, the National observatory of new and emerging diseases conducted an investigation to verify the outbreak, identify the source and implement control measures.

Methods: A case-control study was conducted. A case was defined as "any student of OKBA 2 School with one of the following symptoms: vomiting, diarrhea, fever or abdominal pain from 17th to 20th March 2017". Controls were randomly selected among all school students with no symptoms. Active case search was performed to identify more cases and collect additional clinical specimens for laboratory testing. Also, an environmental assessment was done and food samples were sent to the reference laboratory at Institute Pasteur, Tunis.

Findings: A total of 24 cases and 47 controls were selected. Mean age of cases was 9.7±0.6 years with a sex ration F/M equal to 1.45. Median incubation period was 60 minutes. In multivariate analysis, ingestion of an eggs-cheese-tuna pudding was associated with food borne illness (p=0.01). While specimens and food samples were negative, the environmental assessment revealed serious gaps in the overall hygiene.

Conclusions: Although no pathogen was identified, the source was related to a food vendor in front of the school. Rapid control measures with closing of the establishment for ten days helped in controlling the outbreak.

A10/XIII - INVESTIGATION OF AN IMPORTANT OUTBREAK OF HEPATITIS A IN THE PROVINCE OF OUARZAZATE, MOROCCO, 2019.

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Introduction : On 08 November 2018, a private-sector doctor in TAZNAKHTE commune, Ouarzazate province, reported group cases of viral hepatitis A (VHA), all of whom were children, two of whom were confirmed by serology. An in-depth investigation was conducted from 02 to 05 January 2019 to

investigate, support the control and identify the probable source of this Outbreak.

Methods : A field intervention focused on the 04 communes among 07 belonging to the province of Ouarzazate, which were affected by this outbreak.

Results: A total of 66 children were identified until 05/01/2019 of which 11 were serologically confirmed and 36 children (54.54%) were from urban areas. The sex ratio (M / F) was 1.38. The average age was 7 years old with a minimum of 2 years, a maximum of 15 years and the mode was 8 years old.

Two cases were hospitalized for signs of severity (TP <50%). Sixty-two percent (62.12%) of the cases lived in homes with ONEP water network compared to 25 cases, all rural, who lived in homes served by a local association network. who operates 3 mistreated wells.

The highest attack rate was found in children (<15) in Taznakhte urban commune (75.21 / 10000 children) and the lowest in Telouet rural commune (3.01 / 10000).

Conclusion: The main hypothesis has been the use of uncontrolled water which has proved non-compliant in terms of total coliforms (proxy indicator of VHA) even in urban areas where the population usually buys water from water peddlers whose source is uncontrolled.

A11/XIII - INTEGRATED APPROACH TOWARDS NTD AND EMERGENCY

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Sudan has been facing unprecedented & continuous outbreaks of communicable & epidemic prone diseases. Effective communicable disease control relies on effective response systems, and effective response systems rely on effective disease surveillance system. As per recent workshop on disease reprioritization recommendations by WHO with FMOH, the national Surveillance System for Communicable Diseases in the country focuses 26 diseases/ syndromes. The surveillance system works based on passive case detection principle through designated sentinel sites covering all localities/ districts (189) in the country. However currently less than 30% Health Facilities are covered by the existing surveillance system. There is no evidence on inequality and uptake of services from health seeking behaviour pattern of people. Also the population may not prefer to use HF's remained unaware of potential implications of health emergencies & events leading to its spread among the community. In order to avoid this limitation & to extend the reach of existing surveillance system; WHO with FMOH piloted, thence launched Community based surveillance (CBS) system in 11 states covering around 7000 villages mainly in bordering states where maximum risk and vulnerability take place.

The implementation of Community based surveillance in Sudan further strengthened early detection and reporting of outbreaks, events and rumours of Guinea Worm Disease. CBS has provided an active, rather than a passive, reporting system to detect rapidly any public health events of concerns within community itself to contain timely without its catastrophic impact. This has also provided platform for communities to come closer to their local health system. Eventually, a functioning CBS is win-win situation for both communities and the wider health system. WHO appreciated all the partners for their generous support provided in this initiative including Japan fund, CDC, save the children, EU etc. WHO Representative to Sudan guided the team to promote community involvement as a key to detect, prevent, monitor, response and combat emergencies as well eliminate tropical diseases using integrated disease surveillance system.

A12/XIII - BI-REGIONAL INITIATIVE TO STRENGTHEN CROSS BORDER COLLABORATION IN SUDAN: WHO & MEMBER STATE

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Sudan and neighboring countries faced frequent public health emergencies of different nature and from variety of hazards. That included Acute Watery Diarrhea AWD, Cholera, Meningitis, and Viral Hemorrhagic Fever etc or natural disasters like floods. Nonetheless, due to conflict and other public health hazards those countries observed an increasing movement of millions of vulnerable population including refugees, internally displaced populations, returnees between Sudan and neighboring countries exposing them to array of communicable & epidemic prone diseases in addition to the potential risk for few of the Neglected Tropical Diseases (NTDs) or Vaccine Preventable Diseases (VPD) which are on the verge of elimination & eradication.

As a commitment to Global Health Security Agenda, Peace and development it was aimed to closely discuss analyse and strengthen its collaboration with countries to address those challenges. To achieve this goal, Govt of Sudan in collaboration with WHO organized Bi-regional meeting to strengthen Cross-Border Collaboration of Sudan with its Neighboring countries, which took place in Khartoum 20 – 22 November 2018 with technical and political endorsement. Representatives from Chad, Egypt, Libya, Ethiopia, South Sudan and Sudan in addition to UN and other stakeholders participated actively.

The meeting deliberated on different technical areas of work as collective and one to one challenges, revised and updated drafts MOUs of Sudan with each neighboring countries and endorsed Khartoum Declaration – 2018 of Sudan and Bordering Countries : Cross-Border Health Security.